The Builder.

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Alleyn's Almshouses, St. Luke's.

ON the 13th of July, 1620, Edward Alleyn (formerly an actor, but then an Esquire) laid the first brick of his Almshouses in Bath-street, and in the following year placed three men and seven women as the first inmates of the ten newly-built houses. The present building is in the midst of a densely-populated district, and seems to be nestling for protection beneath the gloomy walls of St. Luke's Hospital; but in 1620 the houses stood almost alone, in what was a thorough country place. Then some of the choicest fruits in the kingdom were reared by one John Milton, in his nursery, in Old-street, and in the same place there were acres of land, known as "The Rose ground." Now there is little to remind us of the existence of fruit and flowers. In 1665 the neighbourhood of the Almshouses was looked upon as far enough in the country to be chosen as the site for a Lazaretto, in which the plague-stricken could be received. The City Pest-house stood here until the year 1737, and the lane in which it was situated obtained the name of Pest-house-row. It afterwards took its present name of Bath-street, from its nearness to the public bath, called first "Perilous Pond," and then "Peerless Pool."

The Almshouses were rebuilt in 1707, and now again they have been rebuilt and enlarged so as to accommodate twenty-two persons, or twelve additional to the original foundation.

Alleyn was one of the most distinguished of that large body of worthies known as "founders," whose claims to our respect have been treated rather lightly by some in the present day. He did not postpone doing good with his money until he could no longer use it for his own pleasure, but he devoted his large fortune to charitable purposes in the prime of his life, while he had vigour enough to superintend the proper disposal of it. He made arrangements for assisting the poor in each of the parishes with which he had been connected. The Fortune Theatre, which produced him a fortune, was situated in St. Giles's, Cripplegate; and in this parish, which then included St. Luke's, he founded the Almshouses in Bath-street. He was born in St. Botolph's, Bishopsgate, and in his will he directed his executors to build ten almshouses in that parish. He lived for several years in Southwark, and made a considerable portion of his money out of some of the places of entertainment on the Bankside, so he left his executors the same directions for St. Saviour's parish. Soon after becoming proprietor of the manor of Dulwich he founded there his "College of God's Gift," and in making arrangements for this his greatest endowment, he did not forget the places in London in which he was interested; for the pensioners and scholars were to be chosen exclusively out of the four parishes of Cripplegate, St. Botolph, St. Saviour, Southwark, and Camberwell, in which Dulwich was situated. Edward Alleyn was born on September 1, 1566, his father being an innkeeper, probably of some little property. Little is known of his early life, but in 1592, when he married Joan Woodward, the daughter of Philip Henslow's wife by a former husband, he had established a high reputation as a player. Thomas Nash twice mentions him in his "Pierce Pennyless" as a first-rate actor. He writes,—"Not Roscius nor Æsope, those tragedians admyred before Christ was borne, could ever performe more in action than famous Ned Allen." Ben Jonson addressed an epigram to "Edward Allen," and likens him to the same ancients that Nash had:—

"If Rome so great, and in her wisest age,
Fear'd not to boast the glories of her stage,
As skilful Roscius and grave Æsope, men
Yet crown'd with honours as with riches then,
Who had no lesse a trumpet of their name
Then Cicero, whose every breath was fame;
How can so great example dye in mee,
That, Allen, I should pause to publish thee?
Who both their graces in thyselfe hast more
Outstript, then they did all that went before;
And present worth in all dost so contract,
As others speake, but onely thou dost act.
Weare this renowne: 'tis just that who did give
So many poets life, by one should live."

Fuller says that he acted so to the life, "that he made any part, especially a majestic one, to become him." Dekker, after mentioning the actor's excellent manner and deportment, refers to his "well-tunde audible voice." He probably gained his fame from acting most of the principal characters on the stage, but he appears to have been particularly renowned for Barabas, in Marlowe's "Jew of Malta," and for the same poet's "Tamberlaine." Thomas Heywood refers to both author and actor in the following lines from his Prologue at the Cockpit:—

"We know not how our play may pass this stage,
But by the best of poets in that age
The Malta-Jew had being, and was made;
And he then by the best of actors play'd.
In Hero and Leander one did gain
A lasting memory: in 'Tamberlaine'
This Jew, with others many, the other wan
The attribute of peerless; being a man
Whom we may rank with (doing no one wrong)
Proteus for shapes, and Roscius for a tongue,
So he could speak, so vary."——

The profession of an actor in the reigns of Elizabeth and James I. was a highly lucrative one, and Alleyn's acknowledged merits were probably well rewarded, but he was not the man to depend upon this source of profit alone. He speculated largely in inns and other house property, and in partnership with Philip Henslow, whom he called his father, he was proprietor of several theatres. The Fortune Playhouse, in Golden-lane, was one of these, and Paris Garden, on the Bankside, was another. Alleyn derived a large part of his property from the former, which was a circular building of brick and tile, well frequented. Thomas Goffe, in his "Careless Shepherdess" (1656), writes:—

"I'll go to the Bull or Fortune, and there see
A play for two-pence, and a jig to boot."

The original theatre was built by Henslow and Alleyn, and Peter Street, the carpenter, was engaged by them to erect a square building of lath, plaster, and timber, which was totally destroyed by fire on the night of December 9th, 1621. Heywood mentions the sign of the house:—

"The picture of Dame Fortune
Before the Fortune playhouse."

This theatre formed a part of the endowment of Dulwich College, and the funds of that institution suffered considerably in consequence during the Civil Wars. In 1649 the inside was destroyed by a company of soldiers, and in 1661 the whole place was advertised as to be sold. Alleyn was Master of the Royal Bear Garden, Bankside, in 1604, when he was engaged to take three of his fiercest dogs to the Tower to fight the fiercest lion there. Stow has given in his "Chronicle" a vivid account of this disgusting exhibition, which took place in the presence of King James, his wife, and Henry Prince of Wales. In the end the lion fled from the dogs, two of which, however, died of their wounds, "but the last dog was well recovered of all his hurts, and the young Prince commanded his servant, E. Allen, to bring the dog to him to St. James's, where the Prince charged the said Allen to keepe him and make much of him, saying he that had fought with the king of beasts should never fight with any inferior creature."

In Elizabeth's reign Henslow had been required to assist "the Master of her Majesty's Games of Bulls, Bears, and Dogs," by lending his dogs and bears from the Paris Garden, so that he hoped to have been appointed to this Patent Office, on the first vacancy; but soon after James's accession Sir John Dorington died, and Sir William Stuart was appointed in his room. Henslow and Alleyn purchased the office of Stuart for 450*l.*, which they complained was a ruinous price, but it was not extravagant if they cleared 500*l.* per annum, as was said. In Henry VIII.'s and Elizabeth's reigns, the favourite day of exhibition was Sunday, which, according to Henslow, "was the cheffest meanes and benyfite to the place"; and when the entertainments were no longer allowed on that day, the proprietors complained of the loss which they suffered. Bear and bull baiting were favourite sports of the English people for many years, and several of the bears obtained great fame; old "Sackerson" was honoured by the notice of Shakspeare, and Sir John Davys, in one of his epigrams, complains that the young gallant forsakes his books

"To see old Harry Hanks and Sacarson."

There is much similarity in the circumstances of Shakspeare and Alleyn, for both became rich through their steady attention to the business of their profession; both left that profession as soon as they were able to leave it with a competency; and both retired to fill the honourable positions of country gentlemen. The question as to the estimation in which the respectable actor was formerly held is a difficult one. There is no doubt that considerable contempt was manifested for the profession, and such men as Shakspeare and Alleyn seem to have been eager to leave it. Many of the actors richly deserved the contempt that was heaped upon them, on account of the ill lives they spent. The popular feeling is seen in the writings of Aubrey and Fuller. Aubrey relates the absurd story that Alleyn was worked upon to devote his wealth to benevolent objects by having seen an apparition of the devil while playing a demon in one of Shakspeare's plays. Fuller says, "In his old age, he made friends of his unrighteous mammon, building therewith a fair college at Dulwich, for the relief of poor people. Some, I confess, count it built on a foundered foundation, seeing, in a spiritual sense, none is good and lawful money, save what is honestly and industriously gotten; but perchance such who condemn Master Alleyn herein have as bad shillings in the bottom of their own bags, if search were made therein. Thus, he who outacted others, outdid himself before his death." At all events, we may be sure that when Shakspeare retired to Stratford, and Alleyn to Dulwich, they at once took that position to which they were entitled by their merits and by their wealth. We have evidence that Alleyn lived on intimate terms with several distinguished men. He was often invited to the houses of the great, and dined with the Lord Treasurer, the Archbishop of Canterbury, the Bishops of London and Winchester, the Speaker of the House of Commons, the Master of the Rolls, Count Gondomar, the Dean of St. Paul's, &c. He was particularly friendly with Archbishop Abbot, and conferred with him on his projects, and the Earl of Arundel, who had a high respect for his character, signed himself in writing, "Your loving

frend." Sir William Alexander, afterwards Earl of Stirling, who was high in James's favour, addressed some verses "to his deservedlie honored frend, Mr. Edward Allane," in which occur the following lines:—

"But thee to praise I dare be bould indeede,
By fortune's strictnesse whilst at first suppress'd,
Who at the height of that which thou profess'd
Both ancients, moderns, all didst farr exceede:
Thus vertue many ways may use her pow'r;
The bees draw honnie out of evrie flow'r.

And when thye state was to a better chang'd,
That thou enabled wast for doing goode,
To clothe the naked, give the hungrie foode,
As one that was from avarice estrang'd:
Then what was fitt thou scorn'd to seeke for more,
Whilst bent to die what was design'd before."

When we consider the social distinctions of rank in the seventeenth century, we shall not be inclined to look upon such evidences of the estimation in which Alleyn was held as of little moment. His benevolent character seems to have been well known before he had made any arrangements for his college, and he received many applications in consequence. In 1610 "St. James's College, at Chelsey," was founded by Dr. Matthew Sutcliffe, Dean of Exeter, for the maintenance of polemical clergymen bound to advocate the doctrines of the Church against the Roman Catholics; but it soon languished for want of funds, and the Rev. Samuel Jeynens addressed a letter "to the worshipful and well affected to all good purposes, Mr. Allen, all health and happiness in this life and in another," requesting him to contribute towards the completion of the college. Jeynens honours Alleyn for the good he has done in his lifetime, and praises him for not having deferred his munificence till after death. Alleyn probably lent a deaf ear to the petition, for the college languished, and in the end the building was given by Charles II. to the Royal Society. Still more interesting are the applications made by Stephen Gosson. The correspondence of the author of the "School of Abuse, containing a pleasant invective against Poets, Pipers, Players, and Jesters," with the delineator of the *Jew of Malta*, belongs to the curiosities of literature. Gosson began life as an author of acted plays, and then became the bitter enemy of theatrical representations. As rector of St. Botolph, Bishopsgate, he came in contact with Alleyn, and in his letters to that "worshipfull" esquire, he subscribes himself "your verie lovinge and ancient freend."

Alleyn's first purchase of Dulwich lands was about 1606, and in October of that year he was lord of the manor. During the next five years he increased his landed property to very nearly its present extent of about 1,400 acres. The land belonging to Dulwich College extends from the summit of the high ground known in its several parts as Herne-hill, Denmark-hill, and Champion-hill, through the intervening valley in which the village of Dulwich is situated, to the crest of the opposite and higher ridge on which stands the Crystal Palace. Alleyn took up his residence at the manor-house, on the western margin of his property, in 1607, but it was not until four or five years afterwards, when being still childless after twenty years of married life, he began to make arrangements for transmitting his name to posterity as the founder of a college. The Charter-house, or Sutton's Hospital, had been founded by letters patent in 1611, and he may have taken a hint from that when deciding on the manner of his endowment. Alleyn began building in 1613, and finished in 1617, in the autumn of which year most of the members of his college were called into residence. He had to suffer from the opposition of Lord Chancellor Bacon, and to experience in consequence many tedious delays, so that his deed of foundation did not receive Royal authorisation by letters patent until 1619, in which year the college was formally established. The college, as thus incorporated, consisted of twelve poor scholars, and as many pensioners in equal numbers of poor brethren and poor sisters, with a governing and teaching staff in addition. The deed of foundation left it within the founder's discretion to frame the ordinances for the government of the college, and he kept the reins of government in his own hands to the close of his life. His code of statutes, framed subsequently to the letters patent, were not signed and sealed by him until Sept. 29, 1626, two months before his death. For nine years, therefore, Alleyn, while living at the manor-house, was the controlling superior of the whole institution. One of the regulations was that the master and warden should always be of the same surname as the founder; and so religiously was this kept up, that in 1670 Anthony Allen, a candidate for the mastership, was rejected for want of a letter in his name; this objection has since been overruled, and one of the best known of the modern governors of the college was old John Allen, the Edinburgh Reviewer, and friend of Lord Holland.

Alleyn seems to have taken a particular pride in his surname, and to have felt that any one bearing it, whether a relation or not, had a claim upon him. On one occasion he invited an Irish preacher to dine with him because he was an Allen. In his diary we find "This day (27th January, 1621-2) I took a pore fatherless child, Ed. Alleyn," and on the 22nd August, 1622, there is another entry to the effect that another "Nedd Alleyn" came to reside at the College. Thomas Dekker also wrote to Alleyn from the King's Bench Prison to introduce to his notice a deserving young man, son of a fellow prisoner, and ended his letter with the hope that Alleyn would "No waye repent the receavinge of such a servant *of your own name*."

The last years of this benevolent man were uneventful, and his thoughts were principally occupied with the prosperity of the College. On November 13th, 1626, when he made his final will, he was "sick in body." He then left his affairs in order and made his kinsmen, Thomas Alleyn, the master, and Matthias Alleyn, the warden, his executors. On Saturday, the 26th of the same month he died, and on the following Monday he was unostentatiously buried in Christ's Chapel attached to the College.

Alleyn looked forward into the future, and wished to transmit his name to posterity, but he was not likely to have foreseen,—that centuries after his death, when every vestige of the houses where he gained his money had been swept away, his foundations would still be flourishing and his name cherished; that his manor would be covered with houses and joined to the great City; or that the Almshouses which he founded in the outskirts of the town would become the centre of densely crowded districts. Men at the mention of whose names he doffed his cap are now forgotten, but his name lives and will long live as one of England's honoured worthies.

The almshouses just now rebuilt in Bath-street, from the design of Mr. T. J. Hill, architect to the Gift Estate Commission, provide eleven dwellings on the ground floor and the like number on the upper floor, or twenty-two in all, in place of the ten as originally standing. Each contains a living-room, 12 ft. 6 in. by 10 ft. 3 in.; a bedroom, 11 ft. by 8 ft. 9 in.; and a small scullery fitted with range and sink, with water laid on. This also forms a passage to the back, and there is a dust-bin, &c., to every tenement. Each room is fitted with cupboards and shelves, and contains a fireplace.*

The tenements on the upper floor are approached by open stone staircases, one of these giving admission to two dwellings. The buildings are arranged in three blocks, a central one of fourteen tenements facing the street, and set back about 38 ft. therefrom, and two detached wings of four houses each, serving to shut out from view St. Luke's Hospital, which premises enclose the site on three sides. This leaves a forecourt, or quadrangle, in the centre, which will be enclosed next Bath-street by a dwarf wall and iron railings and gates.

The architectural style in which the buildings are erected is the Tudor-Gothic of the latter part of the sixteenth century, a little anterior to the time at which they were founded.

The materials are brick, slated roofs, yellow malms for facings; Bath stone for window dressings and moulded heads, strings, plinths, parapets, bays, &c.; and Portland stone for copings.

Messrs. Sabay & Son, of Ironmonger-row, were the builders, and the total cost was 4,500*l*.

* See pp. 985 and 989.

"HOW TO BUILD A HOUSE."

We all remember the reply of the artist to his patron, or patron's agent, who objected to paying so much for a drawing that was done in half an hour, and was met by the representation that the artist had been all his life acquiring the power that enabled him to do such things rapidly. And it is a not infrequent case that a life-long perseverance puts into a small compass, and in a brief time, the results of years of thought and study. M. Viollet-le-Duc, for instance, as we are assured, wrote and illustrated the above-named book,* which now comes before us in an English dress, during the evenings of a two months' surveying expedition among the French Alps. This is a slight enough task compared with the elaboration of the celebrated Dictionary; yet it is probable that none of its author's works will be so extensively read as this, and possible that the more elaborate productions of his pen do not exceed this in value.

The little book is, in fact, the expression of opinions based on many years of thought and study, combined with practical labour, in the field of architecture; a combination the best adapted for forming impartial conclusions, in which neither theory nor practice is exclusively represented. Dissatisfied with the "school" theory of architecture so prominent in the French system of education, M. Viollet-le-Duc betook himself to the study of the Mediæval architecture of France, and thereupon to the consideration how we could best set about building after the spirit of the architects of the Feudal age, the very remains of whose works showed such a purpose and workmanlike concentration of aim upon the object to be attained. We have here embodied in little the lessons which the eminent and indefatigable modern worke has drawn from these sources, in their application to modern requirements, and with a thoughtful and philosophical consideration of the conditions of the problem, not without, also, glances of passing satire at the false methods of the day, pointed enough in its way, and yet so delicately and playfully put that it could scarcely cause annoyance to the most sensitive of its victims.

The progress of the new château, built in accordance with the true principles of architecture, is set forth on the basis of a little story, of which, however, the incident is as slight as could well be, turning upon the absence from her neighbourhood for a year or so of Mdme. Marie N——, the daughter of the proprietor of the old château, on the occasion of her wedding tour, and the resolve of the old people to build a new house for the happy pair in preparation for their return. The other *dramatis personæ* are the worthy couple in question, M. and Mdme. Gandelau, representatives of an old family long known in the district, their son Paul, aged sixteen, and a cousin, Eugène, who is an architect. Paul is at home in unwonted idleness, his studies at the Lyceum having been interrupted by the calamities of the German invasion; and the idea of himself planning the house for his sister, further fanned by an accidental interview with Master Branchu (a shrewd builder's foreman or small contractor, who is not unimportant on the scene), rises before him as an oasis in the desert of monotonous idleness. The married sister is accordingly telegraphed to for a "programme" for the house, and the following sufficiently characteristic "lady's scheme" comes in return:—

"X—. From Baveno. To M. de Gandelau. Arrived this morning—all well. Paul has an excellent idea. Ground-floor—entrance-hall, drawing-room, dining-room, pantry, kitchen not underground, billiard-room, study. First-floor—two large bedrooms, two dressing-rooms; baths; small bedroom dressing-room; linen-room, closets, attic-bedrooms; cupboards plenty; staircase not break-neck. Marie N."

Paul soon finds himself puzzled in attempting to provide for these requirements in a plan, though he crams plenty of balustrades and columns on to the elevation. But the architect cousin arrives on a visit, and the scheme is laid before him, and finally it is determined that the house shall really be proceeded with under the direction and from the plans of Eugène, but Paul is to be his clerk of works and overseer, and thus to learn and direct at the same time. Master Branchu is engaged as builder, but not by contract, and the state of the country almost compels them to be content with what materials are near at hand,—a condition which affords a good opportunity for some practical remarks on the utilisation of common-place materials that come readily to hand.

It is from the conversations between Paul and his architect cousin that we learn the history of the house, and of Paul's course of practical education as an architect. Paul sees the plans drawn, and is taught how to make the most of space and to utilise corners. The first effect of his education is to make him critical on his father's old house, and even hint a wish to have

* How to Build a House: an Architectural Novelette. By Viollet-le-Duc. Translated by Benjamin Bucknall, Architect. London: Sampson Low & Co.

that pulled down and rebuilt also. The remarks of the father thereupon are characteristic of the tone of serious yet unpretending thought and feeling which M. Viollet-le-Duc never loses when regarding the relation of his profession to life and manners. M. Gandelau points out that the house had long been known to the poor inhabitants of the neighbourhood, who inseparably connected it with its occupants,—"they do not need to be shown the staircase that leads to your mother's room or my study, for they know it as well as we do,"—but they would cease to come into a building with which they were not familiar, where everything would have a tendency to repel them if not to arouse envious reflections in them.

"'It is undesirable to disturb visual associations. Our simple-minded neighbours connect in thought the inhabitant with the house. Change the latter, and they will no longer recognise the former. . . . . When you have studied some time, and seen more, you will know that a dwelling ought to be, to a man and his family, a well-suited dress; and that when a residence is perfectly adapted to the manners and habits of those it shelters it is excellent. How many proprietors have I seen who, while destroying their ancestral mansion, to replace it by a habitation conformable, as they thought, to the requirements of the moment, have by the same act ruptured the tie which attached their family to the humble inhabitants of the neighbourhood.' The only reply Paul offered to these arguments was to go and embrace his father and mother; and no better could have been thought of."

By the time the plans and elevations of the château are drawn, Paul has begun to find out some of the difficulties of even the most modest architectural achievement; and was curious to know "how Master Branchu, who could but just manage to write and cipher, had been able to build the mayor's house, which was not such a bad one to look at." Master Branchu, it appeared, was a shrewd workman who had his wits about him, and not unfrequently puzzled his architect; which leads to the advice from Eugène, that "as a general rule, in giving an order you should have thought seven times of the objections to which it is liable, otherwise some Master Branchu may start up who with a single word will demonstrate your thoughtlessness." But Viollet-le-Duc is far from giving to "Master Branchu" the position and favour and patting on the back which some English critics pour forth upon him. He is quite kept in his place.

Paul's commencement of "a course of study in practical architecture" leads to a most interesting and suggestive chapter on building sites, and their treatment under disadvantageous circumstances. In reference to the enduring qualities of stone, Eugène inculcates the necessity of observation on the way the stone has resisted atmospheric action *in situ*, and thinks it important for the architect to go and see the quarries from which his building stone is to come, and notice how the beds stand when exposed to the air, "a thing, I may tell you, our brethren rarely do." An examination of the cellars and roofs of the old château leads to useful reflections on what to imitate and what to avoid. This leads naturally to the subject of timber, and the methods of employing it so as to insure getting its best strength out of it, illustrated in a manner which should render it plain to the dullest comprehension. The foundations are set out and the use of the theodolite explained in the next chapter. In the subsequent one "Paul reflects," and the result of his reflections is to ask his cousin whether he also learned architecture this way, by building a house and overcoming the difficulties as he proceeded. By no means! Eugène had been articled to an architect for two years, who set him "to copy drawings of buildings, of which I was not told either the age, the country, or the use; then to lay on tints." He afterwards obtained admission to the École des Beaux Arts, "where not much is taught, but where they compete to obtain medals and the *Grand Prix*, if you can." Then he was obliged to undertake working for another architect, where he chiefly traced plans, and sometimes made details—"Heaven knows how." Coming to the conclusion that this would never teach him his profession, he gave up five more years "to study architecture in actual buildings, and not merely in those shown me on paper. I set myself to observe, to compare, to see practical men at work, to examine buildings that were crumbling to pieces." At the end of this time he was sufficiently acquainted with his profession to practise it. He was introduced to an agency for Government works, "where I saw methods employed which scarcely agreed with the observations I had been able to make during my previous architectural studies." His remarks on such points were, however, "not well received." Eventually, Eugène got his start from a commercial company, who were erecting large manufacturing works, and had been laid hold of by an architect who proposed to erect buildings for them in the Roman style, "which was not exactly what they wanted. They did not think it quite to the purpose to build in the plains of the Loire edifices recalling the splendours of ancient Rome." He was introduced to the directors, studied hard to find out all they really needed, made himself acquainted with the details of the manufacture, and succeeded in satisfying them. Many of the directors had town and country houses to be improved or rebuilt, and he became their architect, and thus entered upon a practice.

Such is Eugène's account of his course of initiation. It is hardly fair, perhaps, in Eugène to snub the École des Beaux Arts for not teaching what was not in its programme, and what none of its scholars, save himself, probably asked or expected from it. The object in the *École* is to teach school architecture, the art of designing correctly in known and approved styles, and of scientific construction; and those objects have been carried out, we believe, very thoroughly. Nor can we frankly side with Eugène when he tells his pupil that he can learn the theory afterwards, and it will be of more use and be more intelligible to him then; that children learn to talk by inducing to speak their necessities, and not by teaching them grammar. The cases are not quite parallel, and there is a good deal to be said on the other hand in favour of knowing the theory first, only the question is as to how it is taught.

We will pass over the history of Paul's puzzlements over walling and drains and joinery; his greatest difficulty at this stage was in making a drawing of the windows for light in the haunches of the cellar vaults, with their arched heads in the curve of the vault; a matter which Branchu seemed to find it very easy and natural to execute, though the clerk of the works found such difficulty in drawing it. However, at this stage "Paul begins to understand," and in the next chapter to the one so entitled, we have one or two of Eugène's special contrivances illustrated. One of these is making the "jalousies" fold back into rebated recesses in the jambs of the windows, instead of being hung so as to turn round flat against the outer wall, causing gymnastic exercises in order to get at them; but Eugène's more important novelty is his way of constructing the floors or ceilings, for no plaster ceiling is allowed. The joists are oak, of square section but placed lozengewise, so as to have an angle downwards instead of a soffit, and the ends do not go into the wall, but fit into continuous brackets with V-shaped seats for the ends of the joists. Then the lower half only of the joist is seen from below, the space between the middle angles is fitted in by wood panelling, the panelling and the lower faces of the joists are decorated with designs drawn in a single colour on the untouched wood; and this is Eugène's idea of the way to make a floor presentable on the under side, without lathing and plastering it, and thereby, as he unhesitatingly avers, at once laying the foundation for rot and decay. As to this last point too many architects can bring painful corroboration of Eugene's views; and the system is sometimes practised in England, as not leaving those dark shadows and deep spaces and angles for the accumulation of dust which a joisted floor of the ordinary form, when unceiled, presents. Paul's surprise at finding that the smooth level white expanse which he was accustomed to as a ceiling really contained all this construction of joists, is not overdrawn, if we compare it with the utter thoughtlessness of average people as to the way in which things are constructed; and he is very anxious to know how it is that so many architects make ceilings in this way, and hide all the construction, and "who obliges them to do so?" to which Eugène replies, "It would take a long time to explain that to you;" but the question elicits from his father some pertinent remarks on "the plague-spot of the nation,"—the tendency to disguise all imperfections under an outside of finish and show.

Paul begins to find, before this stage of the proceedings, the necessity of being more of a proficient in drawing, and the method Eugène employs to give him the first notion of perspective, simple as it is, may be more effective than some more complicated systems. The clerk of works is instructed to cut pieces of card into the shapes of the various faces of one of the stones, the cutting and laying of which he has been superintending, to put them together with paste into a model, and then to make a drawing of the model in every point of view. After a little practice of this kind he will acquire the habit of being able to delineate on paper the form of any portion of the work. In copying them he is to mark what is hidden from direct vision by a dotted or a finer line—and here is "perspective made easy;" and as good a plan, possibly, as committing to memory a quantity of rules and formulæ (which are forgotten again) for an art which is really attained, in any useful degree, only by practice. The consideration of the staircases forms the subject of the following chapter, and close following on these the "critic" appears upon the scene.

The critic is a M. Durosay, a friend of the family; a gentleman who had read and travelled much, and knew a little of everything. He had been his own architect, and had built a very costly house that had fallen to pieces; his own engineer, and made roads on his estate which were impracticable; and he liked any one who gave him credit for being an infallible judge in matters of all kinds. "If any one had come to consult him on any subject, the moment he was about to step into a railway carriage, he would have let the train go rather than not give a formal judgment with reasons in full. . . . He was fond of repeating this aphorism,—'Light emanates from the shock of conflicting ideas"; but with the understanding that he always played the part of producer, never that of recipient." M. Durosay complained very much of a design for a country house being so shut in; he would have wished to see a portico round it, or a wide verandah. He would have aimed at some resemblance to "those North Italian villas, where the climate is certainly pretty severe in winter and spring, but which are not the less charming with their porticoes, terraces, and wide-open entrance-hall; which have a dignified aspect, and ennoble life." Then there was too little symmetry in the house: a want of that unity which ought to be found in every work of art.

"'But,' said M. Gandelau, 'it is not a work of art that I wish to leave my daughter; it is a good house, convenient and substantial.'

'Very good; but you will allow that if we can secure both kinds of excellence, so much the better. For a person of such extreme refinement and so charming in every respect as your daughter, it is but proper that a habitation should be provided reflecting in its exterior the charms and graces of its occupant. It would be a pleasure to you, in visiting Mdme. Marie, to see in the distance her little family grouped around her under a portico of delicate architecture, or under a *loggia*. But this seems to me more like the house of some grave Flemish alderman. In their gables there is a kind of severity which ——'

'Come, come, my dear friend, gables are not severe; they are gables—that's all. . . . . And I must confess that your Italian villas in the environs of Venice and Verona appear to me very dull and gloomy, with their colonnades and closed shutters. If they built them so to afford tourists models of architecture, well and good; but I make no pretensions to amuse or interest tourists, and my daughter shares my ideas in the matter.'

'Perhaps—but just now your daughter is travelling in Italy: she is going to sojourn on the shores of the Bosphorus; who knows whether on her return she would not be charmed to meet with a kind of *souvenir* of the impressions she will not fail to have experienced there. . . . . What do you think of it, Mr. Architect?'

'As for myself,' said Eugène, 'I am listening, and cannot but be delighted to hear you discourse so ably on our art.'"

The argument is carried on for some time with little success on the part of M. Durosay, who is at last obliged to be content with the promise of M. Gandelau that when he comes to visit the new dwelling, "a pasteboard portico shall be put up in front of one of the façades, and under the shade some Berri maidens, dressed up as Venetians, and some gentlemen, in scarlet robes, playing on the guitar and bassoon."

After this it is not very surprising that in the next chapter "Paul inquires what architecture is," and whether M. Durosay is a judge of it. The discussion of the subject leads to a wider application, and M. Gandelau, in a reflection on the state of things in France generally, pithily observes, "You will find M. Durosay's portico confronting you everywhere." A chapter on theoretical studies sets forth very clearly and briefly, among other points, the distinction between the genuine columnar architecture of the Greeks and the pseudo architecture of the Romans. The second chapter under the same heading commences with a dissertation on the value and designing of mouldings, and the importance of work of this kind being adapted in its sections and effects to the nature of the material employed,—"one of those points on which an architect who respects his art ought never to yield." This remark leads to a discussion on the manner in which clients impose all sorts of fancies on their architects, and the difficulty of

the architect so squaring his conduct as to retain his self-respect without losing his means of living; a discussion which in the end, as M. Gandelau observes, "wanders rather far from mouldings."

The studies are interrupted; for Eugène thinks it right to offer his assistance in the engineering department of the army of the Loire, and Paul is disconsolate enough. His spirits are not improved by a visit to the works at the house, the aspect of which under a stoppage from frost is described in a passage picturesque enough to quote:—

"The works were deserted; snow covered the heap of walling stones, the cut stones, and the scattered timbers. The walls, which had reached a certain height, protected by straw and surmounted by a crest of snow—their surfaces showing brown in contrast with the white veil that mantled them, and some pieces of wood black with damp, gave to these incipient constructions the aspect of the *débris* of a conflagration. Paul recalled the spot so animated a month before with its bands of active workmen. All were gone, and the soul of this habitation, which he had begun to associate with all the joys of family life, had just quitted it."

How Paul recovered his spirits by dint of hard work; how Eugène returned, and the various questions of timber work, joinery, and smoky chimneys were discussed, not without much able elucidation of each, we cannot specify; nor how Paul was sent on a visit to an eminent civil engineer, and was much interested with what he saw of engineering work, and inquired, "What was the difference between an architect and an engineer?" and how he got a short parable in reply. All this we must leave to those who read the book; the aforesaid parable we could scarcely quote, in fact, without discussing its bearing a little, and we have already outrun our space. Suffice it for the present, that the house was furnished before Mdme. Marie's return, and the "surprise" managed with due effect. M. Durosay was present on the occasion, and repeatedly expressed his admiration for it as a "charming feudal manor-house."

"But why, my dear sir," said Madame Marie, at last quite weary of the phrase, "why do you call it a 'manor-house' and 'feudal'? I have neither manor nor vassals, and I have no wish to possess any."

In one of his conversations with his architect cousin, Paul, in reply to a remark of the latter, that "the more you know the more you will feel you want of knowledge," inquires, "what good is it to learn then?" "*That we may become modest,*" responds Eugène; "*that we may occupy life with something better than those things to which our vanity prompts us; that we may make ourselves of some little use to our fellows, without exacting gratitude from them.*" With which quotation we may fitly take leave of a book that may be read with pleasure and profit by many others besides architects, and which is not more noticeable for the sound practical information conveyed in it than for the unpretentious earnestness, sincerity, and simple wisdom which light up every page.

THE LATE MR. R. W. BILLINGS.

On the 14th inst. there passed away one who had been for the last forty years, more or less prominently before the architectural world; some record therefore of whose career will doubtless be acceptable in these pages.

Robert William Billings was born in London in 1813, and at the age of thirteen was articled to John Britton, the well-known antiquary and author, with whom he remained seven years. This connexion naturally fostered, if it did not create, in him a special taste for similar pursuits: accordingly we find him soon after employed with the late F. Mackenzie in illustrating the work "The Churches of London," in a series of views which were chiefly engraved by John Le Keux. He also assisted Sir Jeffrey Wyattville at Windsor, on drawings of the Castle there, and prepared numerous views of the ruins of the old Houses of Parliament after the disastrous fire.

The first publication which he undertook on his own account was the "Illustrations of the Temple Church, London," given both architecturally and pictorially in a very complete manner. In the same way he afterwards illustrated and published, "Kettering Church, Northamptonshire," and "Brancepeth Church, Durham." These were followed by still greater efforts, viz., his important works upon "Carlisle" and "Durham" Cathedrals, from his own careful measurements and drawings; also an excellent work of the "Britton" stamp, called the "Architectural Antiquities of the County of Durham." But his chief production of this kind, and the one with which his name will be mainly associated, was the "Baronial and Ecclesiastical Antiquities of Scotland,"—a noble work in four volumes, containing, besides the letterpress, 240 beautiful illustrations. This undertaking, though a labour of much love, was necessarily also one involving much time, expense, and research, it being upon comparatively untrodden ground. The interesting variety and fidelity of the drawings are deserving of all praise.

Mr. Billings, among other useful qualities, which served him in good stead, was possessed of quick perception, combined with untiring industry. Hence his analytical ingenuity led him to investigate and "Attempt to Define the Geometric Proportions of Gothic Architecture," as exemplified in the cathedrals of Carlisle and Worcester; to illustrate by diagrams the "Infinity of Geometric Design," as exhibited in tracery-panels in the former of these buildings; and the "Power of Form," in a small volume, which was the last he ever published. He became thus, as may be imagined, an expert in architectural devices and monograms, with which he generally sought to identify such buildings as at times came under his control; and this latter branch and his practice as an architect was considerable after he gave up the publication of books. Several mansions erected on the banks of the Clyde are from his designs; also the restoration of the Chapel of Edinburgh Castle (for which he was commissioned by Government); the "Douglas Room" in Stirling Castle, Gosford Lodge, restoration of Hanbury Hall, Warwickshire; House at Kemble, Gloucestershire; Crosby Church, Cumberland; and additions to Castle Wemyss, for Mr. John Burns, upon which he was engaged at the time of his death, having built the castle itself many years previously.

With pen, pencil, and, it may be added, burin, Mr. Billings was a practised hand; his facility and correctness of drawing were most remarkable, expressing where needful all the minutiæ of detail. Thus he was equally at home, whether drawing upon paper or wood, or etching on steel, as he was occasionally wont to do, many of the engravings in his works being executed by himself. Most of these illustrations are on steel, and he was fortunate in the engravers who assisted him. Besides Mr. Le Keux, already mentioned, we find on the list his able son, the present J. H. Le Keux; also Messrs. G. B. Smith, Saddler, Turnbull, Godfrey, Winter, and others; and, in wood engraving, the well-known R. Branston, with all of whom he was literally a co-worker. Reference has been made to his skill as a draughtsman, which was especially displayed in his masterly acquaintance with "perspective." The writer of this notice has seen an elaborate early drawing by the deceased of the interior of the *then* Covent Garden Theatre, which, if he mistakes not, was rewarded by a public medal; also the late Professor Cockerell alluded to Mr. Billings's powers in this branch of art in one of his lectures at the Royal Academy. At intervals of leisure lately he had again occupied himself upon one of his old and favourite themes,—the interior of St. Paul's Cathedral, viewed from the Dome,—an intricate subject, in which he was endeavouring so to modify the rendering of outlying portions as they would be determined by strict rules, as to bring them, so to speak, within the range of possible and undistorted vision. This drawing is on a very large scale, and though, unfortunately far from complete, enough is mapped out to promise a highly satisfactory result, had he been permitted to live to accomplish it.

It remains to add a few words of a more general nature. Mr. Billings had for some time relaxed in his architectural occupations, distributing much of his time and services (for he was never idle), between various public institutions and other engagements in which he was interested. In these, his aptitude for business, energy, and inflexibility of purpose, rendered him a man of mark; consequently his active co-operation was frequently sought, and not infrequently granted. Among these, he had for a long period been associated with the Crystal Palace, and of late years he regularly attended its Board meetings, having been elected a director. Nor is it too much to presume that to his practical knowledge and vigilance is greatly due the maintaining of so large a building in constant repair, with efficient improvements as circumstances offered.

While actively employed in gathering materials for his books, he naturally resided mostly in the localities themselves; but afterwards coming to London, he lived for many years in Islington; eventually, however, removing to Putney, where he purchased a good old English residence which had once been occupied by the famous Sarah, Duchess of Marlborough. Such an abode was quite in harmony with his taste, and here he rejoiced to welcome his friends, time after time, with that ready flow of spirits and entertaining conversation for which he was always distinguished. Here, too, he found ample room for the arrangement and display of that extraordinary collection of works of art, and curiosities of various kinds, which throughout his lifetime he had felt so much pleasure in accumulating.

J. Drayton Wyatt.

THE IMPORTANCE OF NATIONAL INVESTMENTS IN OBJECTS OF SCIENCE AND ART.

Political economists say that "political economy is to the State what domestic economy is to the family." Wise domestic economy induces the possessors of great wealth to invest it in the most profitable way,—profitable both directly and indirectly. Every wise rich man, after providing for his necessities, devotes a portion of his wealth to the acquisition of objects which, if bought with prudence, not only increase in intrinsic value the longer they are possessed, but delight himself, and confer good and pleasure on others. But at present the national policy of this country in this respect is far behind the policy of the wise individual. The vast earnings of our country are beyond comprehension in magnitude, but the amount of its investments in procuring illustrations of science and art directly useful to productive industry and beneficial to civilisation is insignificant, and it is trifling in comparison with what has been spent by Continental nations. It may be said confidently that the most advanced Continental nations have done in proportion to their wealth much more than we have, and that they are reaping results dangerously aggressive on our own commerce. The existence of our welfare is dependent on our retaining a supremacy in industry. Mr. Disraeli, the Marquis of Salisbury, Lord Derby, and Sir Stafford Northcote have expressed their conviction that the progress of industry depends on the cultivation of science and art, and I hope they will act boldly now that they have the power to do so.

Between 1815, when the National Debt reached its maximum of 861,000,000*l.*, exclusive of terminable annuities, and 1873-4, the debt has been reduced to 727,900,000*l.* If a tenth part of that reduction had been invested in objects of science and art, and were now placed in, say, ten provincial museums throughout the United Kingdom, freely consultable by our industrial producers of all grades, not only would the wealth, the culture, and prosperity of the nation have been greatly increased by it, but the objects themselves would still exist, and their intrinsic commercial value would have increased enormously. It may be said that, inasmuch as the nation will never sell its objects of art, they cannot properly be called "investments." The contingency of sale is remote, but recent experience has shown that millions may be demanded as ransom. We will not collect property for this reason, but the collection of works of art improves our commerce and adds to our national strength and resources, helping us to defy demands for ransom, and is more profitable if administered with reason, than a corresponding reduction of taxation. When an individual makes an investment in land, houses, and the like for the use of his posterity, he does not contemplate the sale of it.

About 3,500,000*l.*, it is said, have been devoted to pay off the National Debt during the year 1873-4. This sum lowered taxation about a penny a head on the population of the United Kingdom, an imperceptible reduction; but what an effect it would have on the productive industry of this country and its civilisation if only a tenth part of this sum (350,000*l.*) had been put aside by Parliament in the collection of specimens of works illustrating science and art applied to productive industry, especially works of foreign origin, in order to show the British nation what its competitors in the markets of the world have done and are doing. What a potential effect would be produced in the great towns of Manchester, Liverpool, Glasgow, Belfast, Birmingham, Leeds, Bradford, Sheffield, Nottingham, Bristol, the Potteries, Newcastle-upon-Tyne, Leicester, Halifax, &c. They would be all set in

motion to provide suitable buildings if Parliament adopted the principle now suggested. The principle of investing should be placed beyond the power of the accidental Government of the day to alter it without the consent of Parliament. At present the surplus revenue goes by law to reduce the debt, but a given part of it should go by legal enactment to provide objects for local museums to promote science and art applied to productive industry.

It is beyond dispute that when works of fine art are judiciously purchased, such works increase in value far beyond the compound interest of investments in the Funds. The money value of property in fine works of art will continue to increase as long as civilisation advances in the world, whilst that of any other form of property is subject to more capricious influences. It is far cheaper to purchase when you are able than postpone it to the future. Oliver Cromwell, in about 1650, rescued Raffaelle's seven cartoons for a sum of only 300*l*. Who can estimate the money value of them now? The value of money has not increased in the same ratio since then as these cartoons have. Everybody has specific instances within his own knowledge of the enormous increase which is taking place in the value of works of fine art. The *Bernal*, the *Soulages*, and the *Meyrick* collections did not cost the collectors of them a third part of the sums the objects realised when they were sold. There are pictures in the Sheepshanks collections which would realise more than ten times the amount Mr. Sheepshanks paid the artists for them.

I trust the Government and Parliament may be inspired with courage to do for the nation what wise rich individuals do for themselves, and to lay down the beginning of a fixed national policy, by investing part of each annual surplus of revenue in the judicious purchase of objects of science and art; not for the exclusive benefit of metropolitan institutions, but especially for the benefit of provincial museums.

HENRY COLE.

THE DWELLINGS OF THE LABOURING CLASSES IN THE METROPOLIS.

IT appears now to be the general impression that during the next session of Parliament the Government will introduce some kind of measure for improving the dwellings of the labouring classes in the metropolis and other large towns, and in accordance with a request made to him by the Home Secretary at the close of the last session, Sir Sidney Waterlow has just addressed a communication to Mr. Cross containing a number of suggestions on the subject, which may be regarded as advice to the Government as to the course which ought to be adopted by Parliament for effectually securing a better class of houses for the industrial population of the metropolis than at present prevail.

After stating in the outset that the company with which he is connected as chairman has expended 270,000*l*. in providing land and 1,452 dwellings for the accommodation of upwards of 7,000 persons, and that dwellings are, or will shortly be, in course of erection to accommodate a further number of about 2,000 persons, at an estimated cost of 70,000*l*., he observes that other associations and individuals have provided similar accommodation in the metropolis for about 20,000 persons. He next alludes to the difficulty of carrying on the work owing to the impossibility of obtaining suitable sites in densely populated districts. The relative advantages and disadvantages of suburban cottages as contrasted with the habitations near to where the labouring classes are employed, are then discussed, the conclusion at which he arrives being that except in cases where the head of the family is the sole bread-winner, suburban cottage residences are not only disadvantageous but impracticable. After expressing his confidence that much good must have been done by the efforts of the different associations in erecting improved dwellings, he goes on to state that, after all, those efforts have not reached the real evil, the building companies, except in very few cases, not having been able to purchase and remove houses unfit for human habitation. In continuation he contends that there ought to be compulsory powers for effecting this, which he thinks ought to be exercised only by a public authority, but vestries and district boards are, in his judgment, unsuited, for various reasons, to exercise such powers. The philanthropic societies, he says, have been working with their hands tied, and wretched houses, unfit for human habitation, remain as nests of fever and pestilence, doubling the rate of sickness and death among the occupants, and spreading contagion throughout the immediate neighbourhood. He thus continues:—"I feel sure that you will agree that this state of things ought to be remedied; and the only question that I apprehend can be asked is, in what way can Parliament alleviate this evil without throwing too great a burden on the ratepayers or dealing unfairly with the rights of private property? In what way can Parliament assist in this work, which has hitherto been left so entirely to private philanthropy? What I suggest is that the Legislature, recognising the local authority which the Metropolitan Board of Works and the City of London exercise over the districts under their control, should impose upon these two public bodies, or upon some other public authority, or upon public commissioners, the responsibility and the duty of submitting to Parliament, from time to time, schemes for public improvements, involving the destruction of houses unfit for occupation, and the appropriation of the sites, when cleared, for the reconstruction of tenement-houses suitable for the labouring population, upon plans to be approved by the local authority in the manner prescribed by the Metropolitan Streets Improvement Act of 1872. Notices would be given, and the various interests in the property would, of course, be dealt with in the same way as if it were taken for a street improvement. I am quite prepared to admit that these improvements would throw some temporary burden on the ratepayers; but only a small annual charge, which would, I think, be more than compensated by immediate and future advantages." He then states that the present rateable value of property in the metropolis is 21,000,000*l*., and a rate of one penny in the pound would produce nearly 90,000*l*., or sufficient to pay the interest on 2,000,000*l*., which might be redeemed in forty years if the money were raised by issuing metropolitan consols at 3½ per cent.; and he ventured to say, from many years' experience of the subject, that 2,000,000*l*. applied in the mode suggested would remove, to a very large extent, the houses in the metropolis at the present time unfit for human habitation. He urges, however, that upon higher grounds than the pecuniary question Parliament should take action, and that the homes in which the working population in overcrowded cities are compelled to live can only be improved to any appreciable extent by the direct intervention and assistance of Parliament.

LOWNE'S PORTABLE VENTILATION ANEMOMETER.

THIS instrument is for ascertaining the velocity of currents of air, gas, or vapour, and is specially adapted for mines, public buildings, flues, and so forth. The arrangement is very ingenious. It measures the currents of air by means of fans, placed in a clear opening without any obstruction from the registering apparatus, which is in a separate chamber on the same plane as the fans, so that the whole instrument is quite flat for the pocket when out of use. When in use it stands up in the centre of the case on two dowels. The whole of the works are of extreme sensitiveness; the axes of the fans and first centre work in rubies. The dial gives the current that passes the fans in feet. It seems to us that an instrument, so exact and portable as this is for ascertaining the rate of currents of air for ventilation purposes, is a desideratum. It strikes us that ventilation of our public and private buildings will never be very perfect until an equivalent instrument comes into general use. With such an instrument it would only be necessary to measure the ventilating aperture and size of the instrument and take the rate to know in what time a given interior would have the air changed; and with such knowledge necessary ventilation might be expressed by a figure in the same manner as a light-giving aperture may be expressed. With this extremely delicate instrument the perfection or defect of any particular system of ventilation might be obtained, as the fans will move in slight currents, so that the movement of air in any part of an interior might be ascertained. It is stated, as showing the delicacy of the instrument, that if a distance be walked through in still air it will very fairly measure the distance that the instrument moves. This is, we believe, the principle on which the instrument is tested, only that it is moved at different rates by clockwork in an enclosed chamber,—when error of local currents is quite cut off. Mr. Lowne, who is a man of attainment, tests every instrument with apparatus he has constructed himself, and supplies a table of corrections. He will not pass any instrument of which the workmanship is not quite to his satisfaction.

BUILDERS' BENEVOLENT INSTITUTION.

A GENERAL meeting of this Institution was held yesterday (Thursday), at Willis's Rooms, St. James's, for the election of two pensioners on the funds,—one man and one woman,—from the subjoined list of candidates. Mr. George Dines, president of the Institution, presided, and the poll opened at noon and closed at three p.m. The candidates were:—Evan Jones, plasterer, aged 65 (second application); Robert Noyes, plumber, 76 (second application); William Stribling, carpenter and joiner, 71 (first application); Thomas William Cranstone, builder, 70 (first application); Sarah E. Bear, widow of the late W. E. Bear, plasterer and builder, 68 (seventh application); Jane Rumens, widow of the late J. Rumens, builder, 62 (fourth application); A. N. Williams, widow of the late J. Williams, builder, 62 (fourth application); and Charlotte Day, widow of R. P. Day, late pensioner on the funds of the Institution, 67 (first application). Shortly after the close of the poll, the result was announced by the scrutineers to be as follows:—Jones, 328; Noyes, 471; Stribling, 314; Cranstone, 178; Bear, 2,783; Rumens, 4,243; Williams, 5,243; and Day, 402. The President therefore declared Robert Noyes and Mrs. A. N. Williams to be the successful candidates, and expressed the hope that at the next election, which will take place in May, 1875, a larger number of candidates would be eligible for election.

Mr. Watson (Watson Bros.) proposed, and Mr. Phillips seconded, a vote of thanks to the chairman, and Mr. Bolding proposed and Mr. G. Simpson seconded, a vote of thanks to the scrutineers, on behalf of whom Mr. Stirling responded, and the meeting terminated.

SANITARY STATE OF MINING VILLAGES.

AT the Conference of Miners' National Association, Barnsley, the president (Mr. Macdonald, M.P.), in introducing this subject, said there were many mining villages where the owners did their duty, but in sadly too many instances the sanitary condition was the reverse of satisfactory.

Mr. Casey stated that in the village of Sutton-in-Ashfield, Nottinghamshire, they had sixty members, out of which number ten recently died. This alarming death-rate caused them to make inquiries, and they found that within the last month no less than eighty deaths had occurred during the month. Determined, if possible, to find out the cause of this frightful epidemic in so small a place, the association engaged a man to collect water from the pumps which existed in the place. As the man was taking samples, the schoolmaster and two policemen came up to him and made him empty his bottles. At present the association scarcely knew what to do, but they were determined not to allow this state of things to exist any longer if they could help it.

Mr. Crawford (Durham), and Mr. Brown (North Stafford), having given instances of the suffering and misery caused by want of water and defective sanitary arrangements in their respective counties, Mr. Casey, Mr. Brown, and Mr. Robinson were appointed to visit Sutton-in-Ashfield, and make an immediate report upon the state of the place.

The president said if this state of things was allowed to rest any longer the miners would have no one to blame but themselves. If every district would supply him with facts, it would give him great pleasure, from his place in Parliament, to arraign the coalowners at the bar of the nation.

A Refractory Apprentice.—Walter Frederick Inight, late of Russell-street, Gloucester, was charged with deserting from his apprenticeship at Messrs. Fielding & Platt's, engineers. The defendant deserted in June last, and was apprehended under a warrant in Perth, by P.C. Howes, on Saturday. In reply to the Chairman, the prisoner said he was unwilling to return and complete his contract. He was sentenced to a month's hard labour.

WINGHAM CHURCH, KENT.

This interesting church has just undergone a complete transformation, with the exception of the chantry chapels adjoining the chancel, which have not yet been touched, though greatly needing repair.

The chancel was blocked up at the east end by a huge Italian screen, flanked on each side by large monuments, and the unusually beautiful decorated windows north and south were quite concealed. These have been repaired, and the east end filled by a traceried window of five lights (as indicated by the original jambs). The plaster roof has been removed, and a polygonal canopied ceiling of wood panelling with carved bosses substituted for it. The chancel arch, and the arches connecting with the chantry chapels, together with their Purbeck marble shafts, capitals, and string-courses have been restored. The ancient oak stalls have been repaired, and those missing supplied. New book-fronts with perforated tracery have been designed. The flooring, with its ancient memorial slabs, remains entire, the intervening spaces being filled with tiles. The cost of all these works to the chancel has been defrayed by Lord Fitzwalter, the lay rector.

The body of the church (in plan it consists of a nave and south aisle) has been much changed. The old timber construction of the roof and columns has been stripped of the inconsistent elaborate Italian joinery in which it was cased, and the ancient timbers cleaned and brought to view. The entire body of the church has been fitted up with low open benches. The west gallery is removed, and the tower arch and west window, previously invisible, are now exhibited. A new font of Painswick stone is also provided, and an oak pulpit, with perforated panels, on a Corsham stone base. There is also a new oak lectern from the architect's design. A new belfry floor has likewise being constructed, and an oak screen inserted under the tower arch. The church is principally lighted by pendent duplex lamps.

The sanctuary has been paved with plain encaustic tiles. In the course of the restorations an ancient aumbry in the centre of the east wall was discovered, and a piscina to the south of it, also in the east wall. There being ample space from east to west within the altar-rails, the table has been brought forward so that access to the aumbry can be obtained, which will serve as a credence niche. The ancient stone sedilia still remain.

The total cost of the works will probably be a little under 3,000*l*. Mr. Ferrey, F.S.A., was the architect employed; and the builder was Mr. Charles Jarrett, of Croydon.

SANITARY STUDENTS IN BIRMINGHAM.

At the distribution of prizes, in connexion with the St. George's Science Classes, Birmingham, last week, Mr. George Dixon, M.P., said it was a remarkable coincidence that at this moment in Birmingham they were all deploring the fact that their sanitary arrangements were inefficient, and that great cost and labour, great expense, knowledge, and skill, would have to be brought to bear upon them in order to their removal, and at that time they would find that four young men had given themselves up to the pursuit of the science connected with these sanitary arrangements, and they had achieved a success which would make them—what he hoped it would make them hereafter—peculiarly fitted to deal with this great evil. He would tell them that upon them there was thrown a great responsibility. Their teacher was himself a student. He hoped that the now successful students would hereafter become teachers in their turn, and he hoped that during their life they would be able to do much in spreading that knowledge which would tend to mitigate the sufferings which arose out of a negligence of sanitary laws. But when they praised these students, let them not forget that it was not merely because they had been endowed with great natural gifts, and because, by diligence and assiduity they had turned those natural gifts to account, that they had been successful, but it was because they had been fortunate enough to possess a teacher of extraordinary power. If one student only in a class had gained great success, they might have supposed that that success arose from his own natural talent; but when they found that out of one class all the great prizes had been gained, it could not be that the natural talents of those students alone had been the cause of their success. They must ascribe it, in great part, to the man who taught them all; and he (Mr. Dixon) had come down there that night with great interest, that he might make the acquaintance of Mr. Clarke, the teacher to whom he referred. He found to his surprise that Mr. Clarke was a working jeweller; that he was entirely self-taught; and all he had done had been done after his daily work. When Ruskin wrote upon the Stones of Venice, he commented upon the great magnificence of the buildings he saw, and made the remark that it was strange and to be regretted that, whilst they admired these wonderful buildings, they had no records of the names even of the men who built them. But that must not be so with them. They must remember that this great success had been achieved not merely by the great merit of the pupils, but by almost the still greater merit of Mr. Clarke.

NEW BANK AT NEWNHAM.

The new bank buildings at Newnham, Gloucestershire, which have been opened for business, stand on the site of the old bank in the High-street, and immediately facing the road from the railway, and form an important addition to the public buildings of the town. The buildings are of Classic character, are constructed with Bridgewater bricks, relieved by moulded cornices, and dressings of Bath stone, and comprise banking-room (25 ft. long by 19 ft. wide, and 16 ft. high), approached from the street by a spacious entrance-lobby; manager's room, strong-room, clerks' cloak-room, voucher-room, &c., the latter rooms being entered directly from the bank-room. The entrance-lobby lies between the new bank and the manager's house, and forms an harmonious link between the two. Over the entrance doorway is carved in a semi-circular tympanum the device of the Gloucestershire Banking Company, viz., a bundle of sticks tightly bound together by cords pulled by four hands, and the motto, "Vis unita fortior." The bank-room is lighted by two large plate-glass windows, which are secured by Bunnett's revolving iron shutters. The fittings of the bank-room are constructed of pitch pine, relieved by panels of yellow pine with mahogany mouldings, and, together with the gas fittings, present an attractive appearance. The rooms are warmed and ventilated by Captain Galton's ventilating fireplaces. The strong-room is constructed in the strongest manner, with firebricks built in cement, and bonded with hoop iron and fitted with Tann's patent reliance fire, wedge, and burglar-resisting door and frame. The works have been carried out by Mr. W. Fream, jun., of Gloucester, from the designs and under the superintendence of Messrs. Medland & Son, architects, Gloucester.

READING GOVERNMENT SCHOOL OF ART.

The thirteenth annual meeting for the distribution of prizes and certificates to the successful students of this institution, and in connexion with several private schools and the science classes, took place at the town-hall on Thursday, the 19th inst. The drawings and paintings of the students, and also the prizes, were exhibited in the hall. Sir John Conroy, bart., presided.

Mr. J. O. Messer (the secretary) read the report of the committee, which stated that the Art School had been continued satisfactorily during the past year, under the management of Mr. Havell. The science classes still continued to suffer from the want of a permanent recognised building. The number of pupils attending the Art School was 134. At the second-grade examination 64 students presented themselves, of whom 34 were successful, and 13 won prizes. In the third-grade, 437 works were sent up to the annual exhibition in London by 76 pupils, 5 of whom were awarded Queen's prizes.

The President said that he thought that they might congratulate themselves on the success of the pupils.

Mr. Forsyth, M.P., then gave his promised lecture, in the course of which he said,—If the present was not a scientific age, it was one in which some of the greatest discoveries in science had been made, and if the English were not a scientific people they could boast of a large number of scientific names. The study of the dead languages was sometimes contemptuously spoken of as having but little to do with the real business of life, but he believed that the study of languages was a better discipline for the mind than the study of astronomy or mechanics. More had been done in scientific discovery during the present century than had been accomplished for more than 2,500 years before. The Greeks made little or no progress in philosophical science, and although the Romans commanded the world they were utterly ignorant of some of the first principles to hydrostatics and astronomy. He thought that it was Herschel who said that if a man was confined from childhood in prison, he might be able to reason out the truths of mathematics, but he could never tell what became of a lump of sugar when dissolved in water. As an illustration of this, he might mention that the Greeks attributed the principle of the rising of the water in a pump to the fact that nature abhorred a vacuum. This was received as a sound explanation of every phenomenon, whether hydrostatic or aëriforum, for more than 2,000 years. What he (Mr. Forsyth) complained of was, that men should quit the domains of science, and substitute conjecture for truth, and unverified hypothesis for reality. Science and art acted together, and one could not say to the other, "I have no need of thee." With regard to harmony and grace, the British people ought to be placed last amongst the civilised nations of the world. Surely they might have grace, variety, and beauty, instead of dreary monotony and uniformity of ugliness. Much might be done to improve the taste for art by giving the people picture-galleries, museums, and pleasure-grounds, and adorning them with works of art.

Mr. Forsyth then distributed the prizes.

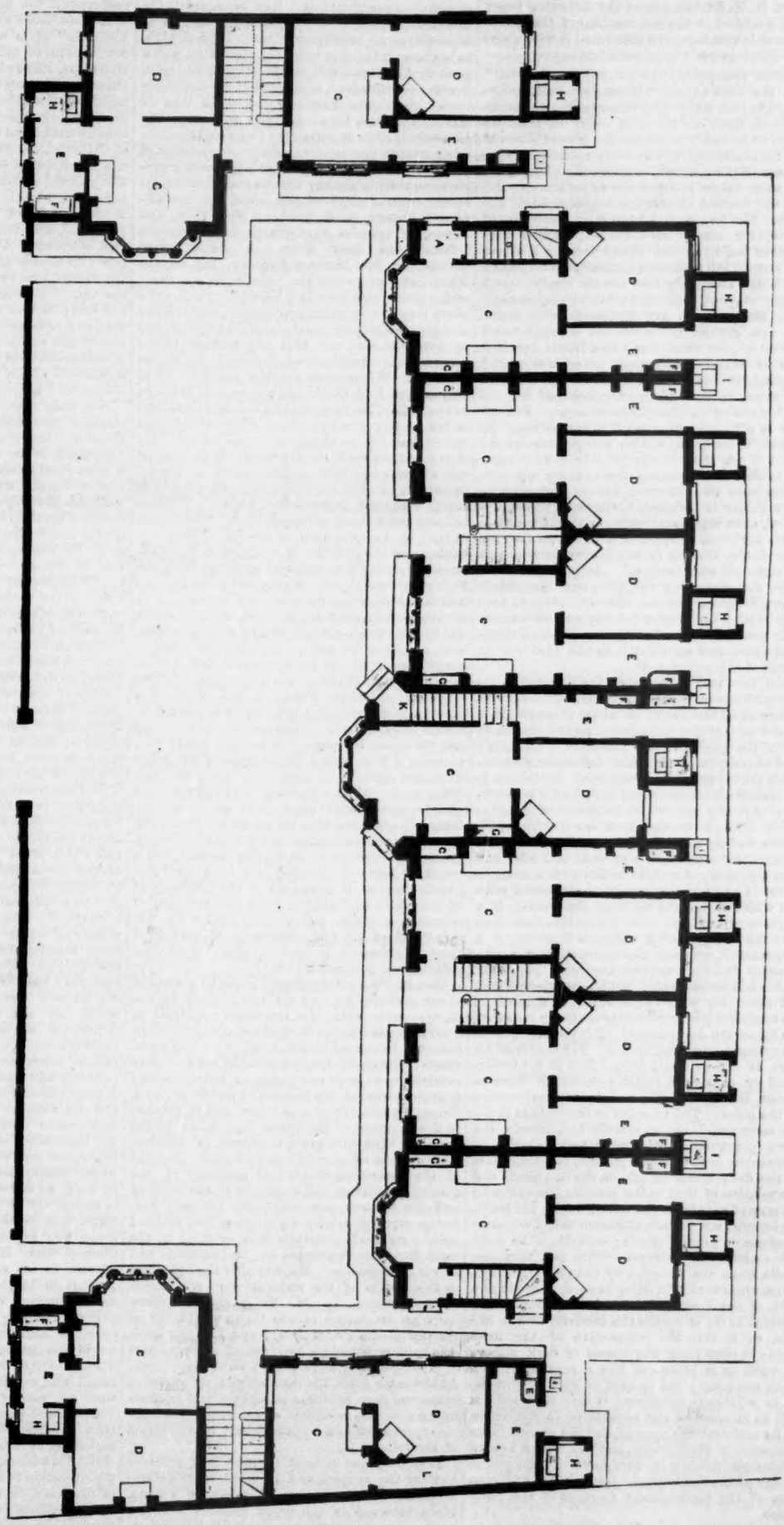
SCHOOL BOARD SCHOOLS.

Rodney-road, Walworth.—These schools are situated at the corner of Rodney-road and Victory-place, about five minutes' walk from the Elephant and Castle. They consist of two separate buildings, one devoted to the use of the infants, of one story in height, and the other, of three stories, to the boys and girls. The latter being placed on the first, and the former in the second floor, the ground-floor being entirely open (except the caretaker's apartments, &c.), and forming an extensive covered playground for the girls and infants. Each school contains a large schoolroom, with four class-rooms adjoining, the infants having in addition extensive classrooms for the use of the "babies." Each department has separate access, with ample lavatory and cloak-room accommodation contiguous. Especial attention has been paid throughout to the sanitary arrangements, and the play-grounds are exceptionally large and commodious. The elevation of the building is plain, but some effect is produced by the introduction of Portland-stone bands to relieve the stock brick facing and the red brick "dressings." The school will accommodate about 1,000 children, and has been erected by Messrs. Cook & Green, contractors, from the designs of Mr. E. R. Robson, the architect to the Board, Mr. R. Walker acting as clerk of works. The amount of the contract was under 8,500*l*.

Leeds.—Four new Board schools, erected at a cost of 30,000*l*., and providing accommodation for 3,000 children, were opened last week. Foundation stones for three other schools were likewise laid.

Yelvertoft.—At the last meeting of the United District School Board tenders for the new buildings were received, but decision thereon was deferred until the meeting on the first Thursday in December. The plans and specifications have been approved by the Education Department. It is in contemplation to apply to the Public Works Loan Commissioners for a loan, the repayment to be spread over a period of fifty years.

Royal Horticultural Society.—The Council are informing the Fellows that they have made arrangements for the establishment of a Skating Rink in that part of the gardens lately occupied by the rhododendron tent, and to which there will be a separate entrance. On three days in the week, viz., Tuesdays, Thursdays, and Saturdays, the rink will be reserved for the exclusive use of those Fellows of the Royal Horticultural Society who may elect to become subscribers. On the other three days of the week the public will also be admitted, on payment of an admission fee. Unless we mistake, it will be cheaper to use the rink as one of the public.



GROUND PLAN

ALLEYN'S ALMSHOUSES, BATH STREET, ST. LUKE'S.

[See pp. 979, 980.

ARCHITECTURE AND LANDSCAPE.

Mr. H. H. Statham read the following paper on this subject at the last meeting of the Architectural Association, and illustrated it with about fifty drawings made by himself for the purpose:—

Bacon commences his essay "On Building" with the curt axiom, "Houses are built to live in, not to look on." The observation, the truth of which from one point of view at least we ought to be ready to admit—for is not the useful the foundation of the true in architecture?—savours of the practical wisdom of a philosopher not to be taken in by shows or pretences; and yet the learned Chancellor forgot one-half the truth. He forgot that houses or buildings, of whatsoever class, have to be "looked on," whether built for that object or not. Pictures and statues are made emphatically to be looked at, though unhappily they are not always worth looking at; but there is this to be said in their case, that, if you are displeased with them, you can always put them out of sight somewhere, or give them away to a friend; or, if a man is unfortunate enough to admire a bad painting, at any rate he does it in private, and his taste is not necessarily imposed on his neighbours or on the public at large. But the case is otherwise in regard to a building. Be it good or bad, there it is; you can neither get rid of it nor hide it. It may be a blot upon the landscape,—an annoyance to every one with senses open to such annoyances; but, so long as its owner is satisfied, there is no appeal;—indeed, even if it be otherwise, and if the owner or his architect be stricken with repentance for their deeds, the toy is too expensive a one to be removed and replaced. It behoves, then, those who are going to plant such an object permanently on the face of the country, to consider well what they are doing, and to contrive their production so that it may not be a stumbling-stone and an offence to the traveller in search of the picturesque.

But this very relation of the building to its surroundings—this self-assertion of the edifice as a portion of the scene in which it stands, if it makes one of the difficulties, ought also to be one of the glories of the architect, for this is a kind of compensation to him for the restriction of his art in some other respects. It is useless (at least it seems so to me) to claim for architecture anything like that intensity of interest which belongs to works of art dealing with human feeling and human expression. The most picturesque combination of wall and roof and turret, pleasing though it be in itself, speaks to us but in an uncertain language, compared with that which addresses us from the canvas of a Leighton or a Gérôme, from the marble fashioned after the thought of a Foley, a Woolner, or a Carpeaux. Nor does the production of a picturesque building require anything like that genius and concentrated study, by which alone, and then only with the devotion of a lifetime, the complete power over expression by means of the figure can be mastered. But the architect is the generaliser among artists. The charm of his work is not in itself alone; it is in the understood or expressed relation which it bears to human life on one side, and to external nature on the other. The mansion or the cottage is not the mere stateliness of marble and mosaic, the mere picturesque of timber and tiling. It represents, or it should represent, the decoration of the daily wants of life on the one hand, and the relation of that to the grander decoration or scenery of nature on the other. Inside his building he need not disdain attention to the minutest comforts or graces of life; outside it he need not restrict his interest within any narrower limits than are bounded by the visible horizon. From wherever his building is seen, it becomes a part of the scene, often the central point of interest in it; it breaks the declivity of the hill side, or it aids the perspective of the level plain; it rises from the bosom of dark masses of wood, or it looks out like a sentinel from a bleak sea coast; but in each of such situations, or in whatever other site it may be placed, it will be interesting and suggestive in proportion as its architect has appreciated the predominant character of the scenery, and has known how to render his building in harmony with the genius of the place, and with the perspective and contour of the predominant features of the landscape.

At the same time it is no easy matter to theorise, even, upon a subject which from some points of view appears so vague, and which certainly is scarcely reducible to fixed rules. But hints and suggestions may be gained in looking at what has been done, and comparing the effects of different combinations. Now in regard to the relation of that most conventional and most refined type of architecture, that of the Greeks, to landscape, there is much to interest us, and a good deal has been said on the subject, and that, it must be confessed, in somewhat contradictory tones. The late Professor Cockerell was of opinion that the Greek temples were specially adapted for effect in somewhat rocky and desolate sites; or that the Greeks specially accommodated them to such sites by giving them heavier proportions than in plains; the one statement seems rather contradictory of the other. A contemporary French critic confirms this view, and thinks the temples were designed with special reference to their sites. A distinguished philosopher, Mr. Herbert Spencer, has on the other hand expressed the opinion, in an essay which shows how loosely philosophers can write when they get on unfamiliar ground, that regular architecture cannot by any possibility be suited to an irregular site, and that any picture representing such a combination is essentially unpicturesque. Where shall we find the concord of this discord? I think the philosopher must go to the wall. The remarks of Professor Cockerell in his work on the temples of Ægina and Bassæ are sufficiently to the point to be quoted. He says that the Greek temples were seldom situated out of or away from cities except on special occasions, as when they were built on the site of some supposed remarkable event. "When temples were thus situated, their remoteness, as well as the grandeur of the scene and the wildness of the country by which they were approached, formed a powerful contrast with the highly-finished object towards which the prayers and footsteps of the devotee were directed. . . . Surrounded by such scenery, we at once admit the fitness of these sturdy and stern proportions, both of the parts and of the whole, so much in accordance with the nature of the site, but so lamentably ineffective in a less conspicuous situation, or when placed in the midst of a crowded metropolis, and on a level with the public streets." I understand this passage as referring only to these temples of unusually heavy proportions. The author continues—"So sensible were the Greeks of this fact, that we find different proportions generally adopted when the temple was placed on a plain or in a city. Generally, too, we may be permitted to remark that architects have adopted a low and horizontal system of architecture to a lofty country, and a perpendicular and aspiring one to a level and flat district, as if conscious of the inefficacy of all attempts at loftiness amid the wonders of mountain scenery, and seeking rather by the regularity of art and succession of horizontal lines, to present a contrast to these rugged irregularities of nature."

Cockerell's remarks clearly point to a view of Greek architecture as a style of contrast to, not of sympathy with, the landscape: contrast at least in regard to the lines of the composition or design. In regard to the relation to the *sentiment* of the landscape, his remarks are not quite consistent, as he in one passage attributes effect to the contrast of the finished object of art with the surrounding rugged scenery, and in another to the harmony of the stern proportions of the building with this same character of scenery. I believe the latter is the correct view. Contrast of the composing lines, and harmony of the general proportion and character of the building and the scenery, are conditions not only perfectly compatible with each other, but which I believe we shall generally find existing in the most fortunate instances of architectural and scenic combination. We see this kind of effect in the sketch of the restoration of the temple at Agrigentum by M. Viollet-le-Duc (taken from an engraving in the October number of the *Gazette des Beaux Arts*); and I do not think this building would be nearly as effective, as part of a picture, if it were placed on a level lawn. At the same time, the harmony of sentiment is preserved here, for there is nothing wild or stern in the site, only a degree of picturesque irregularity, softened to a certain extent by the forms of the foliage.

It is of some interest to note how painters look on the subject, and in what combinations they find their best or most favourite effects. If we take one of the great painters who has made most use of architecture in his landscapes, Claude, we find him in a great measure carrying on the subject for us. Sketching chiefly in Italy, Claude used in his classic architecture almost exclusively (indeed, I think quite exclusively, so far as columnar architecture is concerned), the taller and slighter proportions of the late Greek and Roman orders. His "Liber Veritatis" gives a number of instances of the combination of this school of architecture with landscape, often of a more or less picturesque character, but not stern or rugged, and in many instances of a quiet and restful character, where his favourite architecture is combined with sloping banks and foliage. Now this Late Classic of Claude's goes remarkably well with the trees and the rounded contours of the land; but the Early Doric, I think we feel instinctively, would not do so, unless in a ruined state; and a building in that condition loses its original character a good deal, and becomes, in fact, more or less a part of nature. There is one curious instance in which Claude gives us castles and towers at the foot of a rocky hill, and a circular temple on the top. This seems to me out of place rather; but there is this to be said, that though in a northern climate we connect the idea of inclemency and exposure with a hill-top, the absence of this association in a milder climate may give a different effect. Another point which Claude illustrates I shall have to allude to further on.

We find, then, in the greatest painter of classical landscape (unless we except Gaspar Poussin), the classical columnar architecture associated in the main with landscape either of a quiet rural nature, or with picturesque but not wild or rugged scenes. If we wish to compare with this the impressions of a painter who has shown a special predilection for combinations of Gothic architecture with landscape, we need not go far for instances from a far mightier hand than that of Claude. If the latter is the artist of classic landscape, Turner is still more incontrovertibly the artist of romantic landscape, and, with that, of romantic or "Gothic" architecture. No painter has more largely employed architecture as an integral part of his painted poems—none has more intensely felt its relation to landscape, its value as assisting and intensifying the feeling of a scene, and as giving point to a composition both in regard to outline, and to the opposition of light and shadow. Over and over again we find, in the works of this king of landscape painters, that it is a *building* which gives the key to the expression of the scene,—whether it be a tower rising black and threatening against the light,—a minster or cathedral crossing with its vertical lines the level evening sky, or standing as the centre of the radiations of the rising sun which seem to form an appropriate glory around it,—a castle which seems to stand the one unshakeable object amid the driving tumult of a gale on some bleak coast,—a spire which sends up a pyramid of light into the sky,—or, perhaps, some one small building, insignificant under some aspects, but which has been seized by the painter at the moment when a ray of sunlight has found it out, and forms on his canvas the one spot of high light to which all the rest is subordinate, and in default of which the power and meaning of the work would vanish at once. (Illustrated by various sketches from Turner's compositions.) It surely adds one more motive for our interest in architectural work, both in regard to itself, and its relation to nature, to notice how its monuments have been incorporated by scores, by the hand of the greatest delineator of landscape the world has ever seen, in works whose poetic power will be felt and admitted as long as canvas and colours can keep them in being. It is worth while to notice, also, the distinction between the objects aimed at by these two typical landscape-painters of the Classic and Romantic schools respectively. Claude, in his sketches and studies especially (and it is in this form that the bent of the artist's nature is most truly discernible), is evidently aiming chiefly at a graceful and picturesque contour and outline composition, and an idyllic grace almost peculiar to himself. Turner is epic rather than idyllic, and it is at broad and massed effects of light and shadow that he mainly aims; many of his "Liber Studiorum" sketches being in fact little more than studies of effect, in which outline is secondary or nearly lost. In the landscape in which his buildings form such important features, the attention is more directed to the wide sweep of distances, or to the expanse of sunlight and cloud-shadows over foreground and middle distance, than to those picturesque irregularities of rock and foliage composition in which Claude found such characteristic pleasure. And the favourite architecture of the two painters

evinces the same kind of contrast, the same leaning towards elegance in the one and towards mass and grandeur in the other; and it would not be possible to point to a more striking instance of the distinction between the classic and the romance feeling in landscape architecture than we find on turning from any one of Claude's elegant compositions, with their colonnades fringed by light foliage, to such a threatening mass as that of Turner's Kidwelly Castle; a kind of thing that no one would have thought of painting before the present century; so far have our perceptions of the picturesque altered,—may we not say, become deepened and extended?—within a recent period.

We shall find suggestive hints in further consideration of the subject, from some of these specimens of Turner's treatment of architecture and landscape; but the important part which Gothic buildings play in his landscapes may lead to the reflection how far the builders of our Mediæval cathedrals and churches had any view to their effect in regard to the landscape. Generally speaking, I am strongly inclined to think that the feeling for landscape is a very modern one, and I am somewhat sceptical about the perception of picturesque beauty with which the Greeks are credited. The Gothic architects, however, seem certainly to have had an instinctive feeling in regard to the effect of site upon a design, especially noticeable if we contrast the design and position, for instance, of Lincoln Cathedral with that of the tall thin spires that rise up from the flat country round it. There are no landscape-painters, no Turners and Claudes of the period, to show us how the buildings appeared to them as matter for picturesque illustration; but I noticed the other day, in turning over some of the illuminated MSS. at the Lambeth Palace Library (now open to the public three days a week) some sort of indirect evidence on this point in the filling-in of the backgrounds to the initial letters in one or two works. By the kind permission of the Archbishop, I am enabled to give sketches of one or two of the backgrounds from the "Chronicle of St. Albans," which afford interesting illustration of the manner in which the illuminating artist took note of the effect of distant buildings in a landscape.

Leaving, however, the consideration of what painters of the past have made out of architecture in connexion with landscape, can we, from the hints given us by these and from other sources, arrive at anything profitable or suggestive towards providing material for painters of the future, by so combining our buildings with the scenes in which they are placed that each shall heighten the effect of the other, and that the building, instead of appearing an intruder on the landscape, shall rather appear to be its natural complement, the last grace added to the scene. If it be said that the subject is vague, that you cannot lay down rules in regard to it, that success in such a combination must be the result of innumerable small circumstances and of generally cultivated perception and sentiment rather than of rule: let all this be true (as I think it is), still that is not a reason for avoiding all consideration of the subject, but rather for urging further attention to it. Does it receive sufficient attention at present? There is a story of a man being brought up in a New York police-court for illegally painting an advertisement on the pavement, and that the charge against him was worded "for defacing natural scenery." Would not the magistrates in some districts have their hands pretty full if all the authors of buildings against which such a charge could be levelled were brought up before them? On this head the remark of a recent French critic is to the point:—

"It is the *ensemble* of their creations that the modern architects ought to study. It is to commit an error, to isolate an architectural monument from its framework, by confining the attention to analysing the proportions of the structure; for these proportions should be deduced from the *ensemble*. It is not enough to dispose the masses and study the details, without taking any thought as to the surroundings in which the edifice is to be placed. One must recur to the rules of perspective, and compose with nature before the eyes."

We may congratulate ourselves on having improved in the main the state of things since Repton had occasion to say, in his work on Landscape Gardening, "I have often seen the absurdity of designs being made for a house, where the builder had never seen the situation." Scarcely any architect would do this now; but I think it is true as far as this, that not unfrequently preliminary sketches are made (in pursuit of the useful and perhaps necessary pastime of hooking a client), before the site has been seen, and then the upshot of the matter is that the original idea, made independently of the site, is fitted to the site as well as may be, rather than disturb an idea once formed. And even when the first plan is made considerately in relation to the site, this is done mainly in regard to provisions for aspect, for shelter, and for practical advantages in drainage and foundations,—in short, there is every consideration as to how things will look from the house, but not enough as to how the house itself will look when it in turn comes to be regarded as an object in the landscape. Now, in reference to this, is not the remark of our aforesaid French critic (M. Alphand, director of public works in Paris) considerably to the point, that the architect should "compose with nature before his eyes"? If the first idea of the house or church, or whatever it may be, were sketched on the spot, on the basis of a little sketch of the scene first, would there not be more probability of pleasing and picturesque combination than if the levels merely are taken, and the section adjusted to them on a drawing-board? Perhaps also photography might be an important assistance in such a case, in obtaining, without loss of time, two or three views of a site, upon which to test the effect of different combinations. So much by way of suggestion in regard to one form at least of the *modus operandi* which might be adopted in endeavouring to secure harmony between the building and the landscape. Looking at the question a little more generally, in regard to the nature of the problems to be dealt with, we may, perhaps, consider landscape, from an architect's point of view, as presenting four different classes of site; hilly country, flat country, wooded sites, and those in contiguity to water, whether on the coast or inland. We noticed the almost universally admitted theory and practice which suggests that the hills should be occupied by somewhat low and solid-looking buildings, and the plains by loftier and less bulky ones. This is not only, however, for the reason mentioned by Cockerell in the quotation relative to the Greek temples, viz., that architects were afraid of seeming to compete with the mountains; but also because the exposed nature of a site on the summit or brow of a hill inevitably suggests the necessity for strength and solidity of construction; the castle-like building of square proportions and massive walls boldly mounts the hill, the more delicate building with its fragile spirelets and lighter construction, keeps under safe shelter at the base. But this treatment of hill architecture is subject to modifications. Mere elevation is not alone in question, but the character of the eminence also; for what will look well on a bare and precipitous or rocky eminence may look very unsuitable on one of gentler and more rounded character. Looking at Turner's view of "Powis Castle," for instance, I should say that a modern architect would make a great mistake were he to place a building of such massive and castellated character in that position in such a scene. As it stands, it has the prestige and association of antiquity to hallow it; but as a new mansion it would be a mistake. That regularly-sloped hill, with the platform on the top, affords a suitable basis for a structure of less stern and more palatial character. So, also, Kilgarron Castle is picturesque enough as a view with an old castle in it; but the wooded slopes indicated would scarcely bear so rude an intruder, if in a modern dress. In general, rounded undulating hills require the more modest and ornate treatment of the architecture; square and abrupt ones, approaching to the nature of precipices, demand a correspondingly stern character in any buildings that are to look bold enough to have a right to claim footing on them. And something depends on the manner in which the building is accommodated to the ground. On a comparison of examples I think it will be recognised that the quieter and more reposing effect is gained when the building appears to be placed flat on the surface of the ground, even when on a considerable elevation; the sterner and more monumental effect when it is so treated that its basement is at an irregular level, at one point reaching down into a declivity of the site, at another seeming to climb into a ledge or projection. We see the former effect in Turner's view of Blenheim, which stands fair upon its plateau on a level and extended base, with a look of entire repose: this view struck me as interesting also, as it shows Turner for once indulging in a style not unlike Claude, in the effect of the classic foreground architecture and wooded landscape. In Claude's own compositions, it is probably to be attributed to the level base line that his little circular temples, though placed sometimes on rocks and precipices to match, do not look out of keeping; they have no appearance of really belonging to the situation; they rather look as if they were put down there for ornament and might be taken up again. Instances of the contrary effect are seen in the remarkable view of Lillebonne from Turner. Here the castle seems to rise in the midst like an outgrowth of the rock on which it stands, and into which the outer angles of its towers reach down, while at the inner angles the rock seems to climb up to the towers. Treated thus, a building conveys the impression of being an integral part of the site on which it stands; and (where it can be used) there is no more certain source of architectural power and durability of expression. I have noticed even in such comparatively commonplace things as the tall old Edinburgh stone houses, in High-street and elsewhere, of which the street front looks high enough, but when you come to the back you find the masonry descending sometimes as many stories below the street level to find a firm footing on the steep slope; the effect is quite surprising to eyes accustomed to the flat basement lines of towns built on more sober sites. I was much struck with this kind of effect too in a fine drawing by Mr. Deshon in the chamber of horrors at the last Academy Exhibition (for so the public seem to regard the architectural room), of the tower of St. Antonin, at Pasnières, where the treatment of the base of the tower, rising from an uneven rocky site, is so bold that it is difficult to say where the rock ends and the building begins. It is seldom that a modern architect has a chance of realising this kind of treatment; but when he has, it must be his own fault if he fails to produce a powerful and striking effect.*

CHURCH-BUILDING IN ENGLAND.

SIR,—In your interesting article on Church-building in your issue of November 7th, you observed that it was to be regretted we had not the same detailed information with regard to the various Nonconforming bodies. I think it would not be difficult to obtain this information for the purpose indicated by application to denominational head-quarters, and in the meantime I beg to furnish you with the following table of the new chapels erected in England during the last eleven years by the Baptists as a specimen. You will see by the report which accompanies this letter that the figures have been carefully collected by the secretary of the Baptist Building Fund, or Society, which has been established for nearly half a century for the purpose of helping in the erection of new chapels by loans, without interest, payable in ten years, and which is therefore in a favourable position for obtaining accurate information.

THE TREASURER.

Baptist Chapels erected in England (excluding Monmouth), with the number of sittings provided, during eleven years:—

	Chapels.	Sittings.
1863	24	10,025
1864	37	12,895
1865	44	13,936
1866	33	15,202
1867	19	6,612
1868	37	10,982
1869	36	12,930
1870	28	10,668
1871	40	14,412
1872	35	10,630
1873	28	9,570
	361	127,862

Annual average, 32·63 chapels; 11,532·90 sittings.

A New Church for Battersea.—An appeal is made for funds for the enlargement of the present church, and the erection of a new one in the district of St. George's, Battersea. According to an announcement that has just been made, the only Anglican church, providing for a population of 20,000 persons, all belonging to the industrial class, is the church of St. George's, which has accommodation for a congregation of but 650 people.

* To be continued.

THE NEW PULPIT, WORCESTER CATHEDRAL.—Sir G. G. Scott, R.A., Architect.

PULPIT IN WORCESTER CATHEDRAL.

The pulpit which forms the subject of our illustration, stands in the nave of Worcester Cathedral, and was erected at the sole cost of the Earl of Dudley, to whom the Dean and Chapter are indebted for other munificent contributions towards completion of the cathedral. Judging from the elaborate character of its ornamentation, the richness of the materials, and its magnitude, it must have proved a costly work. It is fixed against the second pier from the chancel arch on the south side. The height of it is about 10 ft. The materials of which it is executed are marbles of various kinds and alabaster, the ornamental handrail being of cast brass.

The plan of the pulpit has been arranged so as to display to the best advantage the sculptured subjects and figures which fill its panels. These subjects are all Bible illustrations of preaching incidents; namely, "St. John the Baptist in the Wilderness," "Our Lord's Sermon on the Mount," "St. Peter on the Day of Pentecost," and "St. Paul at Athens." These panels are separated by niches occupied by figures representing St. Stephen, the first Christian martyr, St. Gregory the Great, St. Jerome, St. Ambrose, and St. Augustine, the four latter being the Latin Doctors of the Church, all sculptured in white alabaster.

This fine work was designed by Sir G. G. Scott, R.A., and was executed by Mr. James Forsyth.

CAMEO-CUTTING BY LADY ARTISTS.

In the course of the address delivered at the opening meeting of the Society of Arts on the 18th inst., the President thus referred to a subject in which we have long felt much interest. He said,—It is deplored by many, and by none more than by the Council of this Society, that there are so few sources of occupation open to the better educated of our female population. Art has ever been looked to as a source from which might spring profitable employment to many among those who have had the benefit of an art education. "The end of art [said Lord Bacon] is to perfect and exalt nature," but to that end it is important that good art should be placed before the people, and to encourage art in connexion with industry is one of the primary objects of our Society. Bearing the foregoing facts in mind, the Society long since pointed attention to shell-cameo cutting as an industry suited to female artists, and published the necessary information relative to the shells more generally used, in the hope that our countrywomen might in some cases be induced to apply their skill and ability in the production of cameos of a higher class than those generally met with in commerce, the majority of which were, and it is believed still are, the products of foreign workmen. The Society has from time to time offered its medal with the view of inducing attention to the subject, but it is not till the present year that it has been able to award the medal so offered, and it has afforded the Council peculiar satisfaction to do so on the present occasion. The report of the committee on the works of Miss Emily Addis Fawcett was highly commendatory, and they hope that the beginning thus made may lead to large and beneficial results, by inducing other ladies to become producers and competitors for a similar medal in future years. The Council propose to continue the offer of the medal on the same terms and conditions in the present as on former occasions, viz., the Society's silver medal is offered to "female artists, for the best cameo designed and executed on any of the shells ordinarily used for that purpose."

ALLEYN'S ALMSHOUSES, BATH STREET, CITY ROAD, LONDON.—Mr. T. J. Hill, Architect

CONSTRUCTION OF THE ORWELL PARK OBSERVATORY.*

To design an observatory cannot fail to be, I should think, under any circumstances, a work of considerable interest, calling for the exercise of great care and no small amount of ingenuity; but when, as was the case at Orwell Park, the observatory had to be connected with an existing edifice, so connected as to admit of facility of access, and to combine with the somewhat complicated domestic arrangements of a country mansion, and yet so isolated as to secure complete privacy and perfect quiet to the astronomical observer, the difficulties, I apprehend, are intensified to no small extent. As the observatory, of which I am now about to give some account, formed only a portion of other works which I was called upon to design at the same time in connexion with the house at Orwell Park, I think it may not be altogether without interest, and at all events is essential to the proper understanding of the subject, that I should, in the first instance, trouble you with a very brief sketch of the whole scheme, so as to convey some idea of what the house was before the operations in question were commenced, and what the nature of the requirements were that I had to fulfil. Without this it would be quite impossible for you to arrive at anything like a correct judgment as to the result.

The original house consisted of a square block, to which had, at various times, been added several adjuncts, such as the picture-gallery, billiard-room, and conservatory to the west, and an entirely new wing to the east, embracing the whole of the domestic offices, and beyond that, again, the stable-offices, brewhouse, and laundry-offices, &c. In connexion with these additions the main block of the mansion had, so far as the south front is concerned, been refaced, and made to assume the architectural garb it now possesses. These operations had, at different periods, been carried out by the late Mr. Buon. Such was the subject for treatment. The requirements of the proprietor were,—one or two suites of first-class bedrooms, in which the house was deemed to be deficient, forming state apartments; a Turkish bath; and, though last not least, an observatory, with other minor and subsidiary wants not necessary to specify. The main building, comprising the principal apartments, was complete in itself, and answered every purpose required of it. The east wing, comprising the domestic offices, was excellently arranged in point of comfort and convenience, and of a substantial character. It was clear, therefore, that neither one nor the other could be materially altered without disturbing arrangements which were good, and incurring a large and unnecessary outlay. Accordingly I resolved to adopt an arrangement which possessed the merit of retaining the whole of the existing buildings intact, with some unimportant exceptions—while it extended to more than double its then length the principal architectural front of the building, and obviated the inconvenience of the servants' offices overlooking the private grounds. This was done by building up the whole of the windows of the offices which looked to the south, and (by the sacrifice of one or two servants' bedrooms only, which were obtained elsewhere) lighting and thoroughly ventilating from the roof the offices which had previously looked to the south, an operation which proved perfectly successful and satisfactory. This simple expedient solved all difficulty, for the whole space to the south of the east wing was thus made available for the erection of an entirely new wing, comprising the additional accommodation that was required, shutting out from view the ugly and unfinished appearance of the old east wing, and completing the architectural façade of the building to the south. This new wing consisted of a handsome suite of apartments on each floor, so arranged that the rooms might be used together or separately, as occasion required, accessible on each floor by means of a corridor 170 ft. in length; in connexion with which was provided a new principal staircase, a feature of which the house was much in want. At the extreme easterly end of this new wing I placed the observatory, thereby providing a handsome and convenient access from either floor, by means of the corridors already mentioned, and at the same time securing that complete isolation that the peculiar circumstances of the case called for. The rooms on the principal floor were arranged so that they might be used as a complete suite of family apartments, the proprietor's business-room being at the east end of the suite, in close proximity to which, but properly shut off, were the Turkish-bath chambers, and in immediate communication with which was the observatory above, by means of the private staircase.

Having thus taken a cursory survey of the general arrangement, I will now proceed to describe in detail the portion of the work which more immediately concerns us at present.

To say that an observatory is a place from which to study and take observations of the heavenly bodies, is to repeat a definition familiar to every schoolboy; but, accepting that definition as correct, it follows that the structure is one which is formed for the reception, permanently, of astronomical instruments of the utmost delicacy, and of great intrinsic value, the mathematical accuracy and consequent utility of which would be destroyed by the smallest defect in the constructive properties of the edifice which contains them; and I think, therefore, that I am not exaggerating the importance of the subject when I say that there is, perhaps, no building which calls for more anxious thought, and more careful attention to every detail, on the part of the architect to whose care it is confided. On the other hand, there is perhaps no subject, the peculiar properties of which lend themselves so little to the production of a good architectural effect; so much so, that it has been doubted by Gwilt, whether it is possible to combine such features with beauty of design. And when it is considered, for instance, that the dome of an observatory, intended for an equatorial instrument, such as the one at Orwell Park, must be made to revolve, must have a movable shutter, and must be finished without any lantern or spiral termination, it must be conceded that the doubt which I have alluded to did not arise without sufficient reason. I shall probably illustrate most clearly the difficulties attending the design and erection of such a building, whether viewed from a constructional or architectural point of view, by referring in point of order to what appear to me questions of primary importance, and by explaining how such questions were treated in the case of the Orwell Park observatory.

The first point of primary importance that demands attention in the construction of such a building, is the site. In the case of Orwell Park, this did not admit of much choice, inasmuch as the observatory was required to form part of the mansion. Fortunately, the position of the house, standing as it does on the high banks of the river Orwell, was well adapted to the required purpose. As a rule, however, for general guidance, I believe the best position for an observatory is considered to be the summit of a low hill or rising ground, so as to command the horizon without entailing the expense, and involving the difficulties which attend the construction of a lofty edifice. At Orwell Park the observatory, although standing on high ground, had necessarily to be of considerable height, in order to surmount the adjacent buildings and the lofty trees in the vicinity. It was stipulated by Mr. Airy, the engineer who designed the scientific and mechanical portions of the work, that the floor of the equatorial room should be 6 ft. above the top of the highest chimney in the mansion adjoining, a stipulation which involved a height of 53 ft. from the ground level, and of 72 ft. to the top of the dome, the total height from the bed of the foundations to the top of the dome being 86 ft. It is to be noted also that when an observatory is erected in the vicinity of a river, it should be placed at such an elevation as to be above the reach of fogs, for such may prevail when the sky above is clear and well adapted for astronomical observations. I gather from an article recently published in *Engineering* by Mr. Airy, that he "has frequently seen a dense fog extending as high as 100 ft. above the Thames, at Greenwich, while at the Royal Observatory, 150 ft. above the river, the air was perfectly clear, and the stars brilliant."

The next point of primary importance that calls for special consideration, is the nature of the foundation. It is not so much on account of the actual weight of the superstructure (although in the case in point that was very considerable) as on account of the absolute necessity of securing a basis perfectly immovable, beyond all fear of settlement, and above all free from any chance of vibration. The nature of the foundation at Orwell Park was a hard loamy sand, which was so firm that for the buildings generally I did not deem it necessary to resort to any artificial foundation, but bedded the footings at once upon the sand. In the case of the observatory, however, where the excavations had to be carried to a considerably greater depth, there were occasionally soft places, with water. The soil in such places was removed, and the holes filled in with concrete, and in addition to this, the whole observatory building was placed upon one solid bed of concrete, 4 ft. in thickness, and extending 30 in. beyond the lower course of the footings. The only possible objection that might be urged against this plan is, that the concrete being one mass, upon which both the outer walls and the central pier of the observatory stand, might act as a conductor of tremour or vibration from the outer shell to the kernel which it enclosed. The chances of this, however, were considered remote in the cases in point, and the result has, I believe, perfectly justified the conclusions thus arrived at. One can easily imagine, however, that were the central pier made to stand upon a foundation separate from that of the building which encloses it, and consisting say of piles driven deep into the surface of the earth, there could be less risk of the pier being affected, even to the remotest extent, by vibration—and in theory, therefore, it may I suppose be conceded that such a foundation would be the most perfect,—but from a practical point of view, the distinction does not appear to my mind to be one of material consequence.

Next in importance, and second only to the foundation upon which it stands, comes the pier or pillar which constitutes the heart of the structure, being the support of the instrument in the observatory above. The difficulty of obtaining a secure support for the instrument, perfectly free from vibration, must of course increase proportionately with the height to which it is carried; and it might possibly be better in some cases where the height is exceptionally great, or where it might facilitate the planning of the lower portions of the building, to introduce more than one support, thereby leaving a clear space beneath uninterrupted by any central shaft. In the case of Orwell Park, Mr. Airy stipulated that the instrument should be supported upon one central pier or pillar, circular on plan, and carried up from the foundation to the height of 60 ft. in one solid and unbroken mass of brickwork. At the base, and for the height of 12 ft., this pier was 10 ft. in diameter; from this point to the height of 32 ft. it was 8 ft. in diameter; and for the remaining 16 ft. it was 6 ft. in diameter. It is perhaps superfluous to state that the brickwork of this pier was of the very best description; but it is worth noting that it was built in mortar, not cement, by Mr. Airy's special desire, the former material being less subject to expansion; and the precaution was taken of carrying up the work slowly, so as to allow the brickwork to set thoroughly throughout the entire mass of the column. At the level of 7 ft. from the top of the pier, a 12-in. hard York stone, from the Idlestone quarry, was inserted, 6 ft. diameter, and again on the top of the pier a similar stone was bedded, which latter formed the upper surface of the column at the exact level of 3 ft. 10 in. below the floor of the equatorial room, and to this stone was afterwards fixed the iron casting which formed the support to the instrument. The one point of supreme importance, which required to be specially attended to in connexion with this pier was, that it should have absolutely no contact whatever with any portion of the surrounding building, from the foundation upwards, just as much so indeed as if it had stood by itself, an isolated pillar. To effect this object I encased the pier with a circular wall of 14 in. brickwork the whole height from the foundation upwards to the floor of the observatory, leaving a clear space of 6 in. throughout between the outer surface of the pier and the inner surface of the enclosing wall, and thus it became utterly impossible that the pier could be, even to the smallest extent, affected by its proximity to the surrounding buildings. The diameter of this circular well, as it might be called, was made to diminish upwards, following the diminishing diameter of the pier which it encased, so as not to lose space in the surrounding building, which might prove valuable for other purposes. The internal diameter of the dome of the observatory was fixed by Mr. Airy at 20 ft. in the clear, and the circular walls which supported it and formed the equatorial room, were consequently required to enclose a space of 19 ft. 6 in. diameter. It

* From a paper by Mr. J. Macvicar Anderson, Fellow, read at the Institute of Architects, as mentioned in our last.

is obvious that had these walls been carried up from the foundations, the space between them and the 14-in. wall enclosing the pier would, especially towards the bottom, have been so limited as to have been practically useless. On the lower floors, therefore, I constructed the building of a much larger diameter, and of octagonal form, measuring 32 ft. from out to out. By this means I obtained a space all round the central pier, 7 ft. 6 in. in the clear between the external walls and the 14-in. inclosing wall already alluded to. This space in the principal floor appeared to me well adapted for, what was one of the requirements of the proprietor, a Turkish bath. I therefore formed an adjunct to the observatory building on this floor, and placed therein the "sudarium" and "tepidarium," being the two hot chambers, and reserved the whole of the space surrounding the central pier of the observatory for the "frigidarium" or cooling chamber. These chambers were heated by a special furnace, placed in the basement immediately beneath, capable of raising the temperature in the innermost or hot chamber to 200 degrees, and a proportionate amount of warmth was also introduced to the other chambers, the whole being so arranged that the temperature in each chamber could be regulated as might be desired. The cooling chamber, which occupied the spaces around the central pier of the observatory, was of octagonal form, and was proposed to be finished in a style of Oriental luxuriance, with shelfs of polished marble, a dado and wall linings of coloured marbles, and a veined marble floor, the groining which was executed in plaster being intended for coloured and painted decoration. The large recesses were prepared for luxurious couches, and the chamber was thus intended to form a sumptuous and agreeable lounge for general purposes, as well as for the more immediate requirements of the Turkish bath. The space on the first floor, immediately above, was occupied as a muniment chamber, arched over, as well as the chamber beneath, with brickwork in cement. On the floor above this muniment chamber, the circular, external walls of the observatory proper commence. These, however, were not in any way supported on the brick arches just referred to, but upon a series of sixteen wrought-iron girders, resting at one end on the external walls of the octagon below, and at the other on the 14-in. wall enclosing the central pier, overlapping the latter inwards, so as to form the support to the diminished diameter of the 14-in. enclosing wall above, and receiving about midway between the bearings the circular wall of the observatory. At this level, the space was occupied by a Belvidere, accessible by means of the spiral stone stair leading to the equatorial room above, and from which might be obtained good views of the park and surrounding scenery. For this purpose the walls of the observatory were on this floor pierced with a series of arches, and the junction architecturally between this circular building and the larger octagonal one below, was formed with large scrolls or trusses of moulded and carved masonry, one being placed over each angle of the octagon. The observatory itself, or, as it is otherwise called, the equatorial room, was reached by means of the spiral stair already referred to, at the top of which was a doorway, 6 ft. high by 2 ft. 6 in. wide, the height of the door being thus restricted in consequence of Mr. Airy's stipulation that the extreme top of the observatory wall should be exactly 6 ft. 5 in. above the level of the floor. The observatory, as has been already stated, was circular on plan, 19 ft. 6 in. diameter in clear of the walls, which were 22½ in. in thickness. It was lighted by means of small circular-headed windows in the walls forming incurves externally, the apex of which did not rise above the stipulated height of 6 ft. 5 in. from the floor. Corresponding with the doorway from the circular stair, was another and similar doorway leading to the transit chamber, a small room prepared for the reception of the transit instrument, a necessary accompaniment to the equatorial instrument which Mr. Airy adopted for the observatory. In the floor of this chamber a hard York stone, 5 ft. by 3 ft., was fixed forming the foundation for the transit instrument. It was stipulated that this chamber should be upon a certain axis, which condition I was so far fortunate in securing by placing it on the north-east side of the observatory, corresponding to the turret-stair on the north-west side, in which position they were less prominent than they could have been elsewhere. These projections or turrets for the stair and the transit chamber, it was difficult to make architecturally effective, in consequence, first, of their destroying the circular outline of the observatory, and, secondly, of the necessity of keeping them beneath the top of the general line of masonry, and finishing them with flat roofs. They were, in short, excrescences to which I did not hope so much to impart beauty, as to redeem them from positive ugliness.

It is not my intention to enter at all in detail upon the construction of the dome, or of the mechanical contrivances for working it, nor yet to allude even to the astronomical instruments, because these will be much more ably and clearly described by the engineer who designed them, Mr. W. Airy. I must, however, be permitted to render this descriptive sketch complete, by referring briefly to one or two particulars. The chief constructive feature of an equatorial room is the dome, which must be made to revolve, and it is, of course, of the greatest consequence that it should do so easily, and without the application of much effort. In the case of Orwell Park, the dome, which weighed about three tons, revolved upon a series of wheels contained in boxes formed in the masonry for the purpose, the motive action being by means of a grooved wheel and endless rope, which acting on a circular rack on the top of the wall, caused the dome to revolve with great ease. The wheel-boxes just referred to, were, I think, sixteen in number, and were formed in the top course of the masonry, and constructed with a stone in front of each, bolted and made removable at pleasure, in case of the boxes becoming choked, or the wheels requiring repair in course of time. The dome was constructed of iron ribs 4 in. thick, covered on the outside with deal boarding to receive the copper sheathing which formed the external covering, and lined on the inside with polished mahogany boards, with joints radiating towards the apex. The walls were similarly lined on the inside with polished mahogany boarding. The dome was provided with a shutter, which was so contrived as to open easily and yet be perfectly weather-tight when closed, and which extended from the base to the apex, forming a complete slit when open on one side of the dome. The casting which formed the support of the equatorial instrument, was securely bolted to the top stone of the central pier which has already been described in detail, and as it was of considerable weight, it was necessary to specify that the contractor's scaffolding should be of sufficient strength to hoist a weight of several tons. The equatorial room was provided with the means of being heated by warm-air flues from the boiler of the Turkish bath below.

It may be thought by some that an observatory is a somewhat unnecessary, as it is no doubt a very unusual adjunct to a country house. But why, let me ask, should it be either? Is there any reason why a country gentleman, the inheritor, it may be, of vast domains and unbounded wealth, who has surrounded himself with the noblest and most elevating productions of human genius, should not occasionally devote himself to the grand, the wondrous study of the works of God in nature and creation? Apart altogether from its scientific importance, is there any study better calculated to sink into utter insignificance all that we esteem to be great and valued? The power acquired by wealth, title, position, the most cherished possessions, and most costly treasures, do they not drop from our affections like crumbling clay, in the contemplation of the great universe, whose limits are boundless space, in comparison with which man, and all he possesses, are but as a drop in the great ocean?

In conclusion, I will only venture to hope that by reading this paper before you, I have demonstrated that it is not impossible to erect an observatory in connexion with a country house, forming an integral part of it, and combining facility of access with complete isolation, and at the same time to treat it in such a manner that it need prove neither an unsightly object nor an architectural eyesore.

THE STATE OF KIMBLE CHURCH.

SIR,—In reference to the letter in the *Builder* of the 21st., would it not be just that the patron of the living, who has a money interest in the appointment of the minister, should to a degree be answerable for the state of the church, where the parishioners are too poor to restore it, or the land proprietors, as is the case in Scotland, where the heritors are bound to uphold?

T.

"SOAPING."

SIR,—It is said that a physiologist can project the entire animal from a fossil bone. There is, doubtless, a certain conformity between the whole and its parts in every being, state, or system of nature. This holds true of an age. Ages have their individualities, and the features of an age are in unison with its general character. You will find that the manners, social life, costume, ornament, painting, sculpture, and literature of the time of Louis XIV. are correlated, and in perfect accord. The trail of the serpent is over them all; and if we turn to England and our own time, the unison of characteristics is conspicuous.

In an age when puffing by advertisement is possible, be sure you will find a certain kind of consistency in its other forms and features. Superficial knowledge, spurious art, spurious science, and affectation: quackery everywhere. But there is one consonant, consistent feature of this state of things which we propose to treat by itself, viz., "soaping."

Soaping is a necessary concomitant of a puffing age—and why? Because the success of puffing depends upon the abnegation of thought in the masses. People no longer think for themselves, and a people that no longer thinks for itself is sure to be led by the nose. It is not difficult to lead it, for feeble convictions are soon turned. The assurance of the puff direct, the unflinching puff, is sufficient to give direction to the feeble mind. But there are professions, the members of which are precluded from availing themselves of the *puff direct* in the advertising columns of a journal, but who in such an age must be puffed nevertheless, and this is only to be effected by *soaping*.

In order to be *soaped*, you must *soap*. If you cannot do this with a good grace and appropriate unction, your chances of success in life will be very poor indeed. You may reap your reward in the future if you have genius, but for the present you will be snubbed, kicked, and set on one side as a disagreeable and impracticable fellow.

To *soap* everybody alike, of course, would not pay,—would defeat the very aim and end of soaping. The full powers of lather must be reserved for the birds of the same feather as we; for our set, our quackery, our specific, our gilded pill. If any young professional man feels a sense of isolation, an examination of his position will doubtless reveal the cause,—he does not belong to a clique. Forthwith he must choose his set, tender his allegiance, and all will be changed. Henceforward he will have a host of friends whose soapy adulation will lubricate his "ways" and launch him into the murky sea of notoriety. But farewell to independent thought and action; he is now and for ever a thrall. In return, however, for this self-sacrifice, his work, whatever that may be, will be lauded to the skies by the organ of the clique, whose bounden duty it is to *soap* the fleece of the chosen flock, and to blacken the wool of all sheep which bleat from other folds.

How to get *soaped* is an important problem, which every one in the present day has to solve for himself. If you know that your little best is very small indeed, a kind of self-knowledge which little understanding very seldom possesses, why choose your set, tender your allegiance at once, and link yourself with its fortunes. But if you be more ambitious, fancy yourself gifted with extraordinary powers, and have a desire to be the *soaped* of all *soapers*, the position is somewhat more difficult of attainment. In this case, the better way is, perhaps, to begin by doing something extraordinarily eccentric in politics, literature, or art,—something which no reasonable soul, no one in his right senses, would dream of doing. The critics will then divide and do battle upon the subject, and you will be the hero of one party. Then is the time to "strike ile," and gather round you a host of *soaping* retainers, and establish your position. You must become president of some society, from which you must skilfully either eliminate or exclude any possible rival luminary. By such means, in a short time you will be surrounded by a legion of *soapers*. Should you, however, attain to this much without possessing any real force, eccentric, though it may be, you will soon tumble from that height, for *soapers* look for reward, and should you not be able to confer this, you will find the suds, the prismatic bubbles all subsiding into very flat and dirty water. If, on the contrary, you can continue to astonish the world by your antics, there is

no knowing to what preferment you may be *soaped*.

Another very effective way of getting *soaped*, and to a considerable position of esteem and credit, in a clique, is to write a book in its support, using all the sophistry of which you are master, declaring this to be the only band of regenerators, political, social, literary, or artistic.

The most unfortunate man of all in a *soaping* age, is the man of real ability, conscientious as he is most likely to be, and unable to *soap* what he does not approve, what he knows to be wrong. The only path open to him is to let the powerful claim his ideas as their own. He may then get a little soft soap, though another get the lather, and all the credit. If he does not submit, woe betide him: there will be no flattering unction to lay to his soul. Rest assured, he will not be

SOAPED.

THE PREVALENCE OF FEVER.

Marylebone.—On the 18th inst., the medical officer of health, Dr. Whitmore, issued his monthly report. The number of deaths for five weeks from diseases of the zymotic class was 68, amounting to no less than 22 per cent. of the total deaths. Of these, scarlet fever was by far the most fatal, and next in order came diarrhœa and typhoid fever. Scarlet fever destroyed 31 children, all under the age of eight years, the great majority of them not having reached the age of five years. The disease appears to be confined to the northern division of the parish, and is chiefly prevalent among the children of the poor in the crowded districts contiguous to Lisson-grove and Church-street. In Dr. Whitmore's opinion, the law as it at present exists for preventing the spread of the contagious epidemic diseases is altogether insufficient, and must continue so until further enactments of a stringent character are added, which shall provide for the compulsory isolation of infected persons, and prohibit all intercourse between them and the healthy until such time as they shall be declared by medical certificate to be incapable of communicating disease. The better classes of society, as a rule, are fully conscious of the danger, and are not slow in adopting measures to avert it; but the poor and destitute are regardless of the simplest precautions, caring neither to protect their own offspring from infection, nor, if infected, to prevent them infecting the offspring of others.

Carlisle.—Carlisle has been suffering from an epidemic of typhus and scarlet fever. The first outbreak was in the last week in April, and since that time above 500 persons have been affected. The fever was at first confined to three places. The medical officer being unable to get the patients removed from their homes in densely-populated courts, the isolation of the infection was not accomplished, and the fever spread from place to place. One of the first centres of infection being near the barracks, the military authorities became alarmed in June; an inspection was made, and some of the more glaring nuisances were removed. At the end of July there were about forty fever patients in the hospitals. By the middle of September there were as many as between 150 and 200 cases of fever in the city. The citizens formed themselves into committees of inspection, who distributed themselves over different districts, and sent to the local authorities reports of what nuisances they had found on their rounds.

Sedgley.—At the usual weekly meeting of the Board of Guardians, on the 20th inst., Mr. Elliott Hollier called the attention of the guardians to the fact that out of twenty-one fresh certificates presented that morning by Mr. Egginton, the relieving officer for Upper Sedgley, fifteen were for fever. There seemed no abatement of fever in the above district, and the matter was becoming very serious for the union. The Rev. B. C. Young said it was only the upper side of Sedgley which was being decimated by fever. It is gratifying to be able to state, however, that prompt and energetic measures have been adopted in the direction of supplying a good and much-needed water supply.

Maidstone.—From the report of Mr. Barham, the medical officer of health, it appears that the four fatal cases of typhoid fever, which occurred in the town during October, were not to be attributed either to foul air, defective drainage, or impure water. A stream of water running through a dirty horse-pond, and conducted through pipes direct to the reservoir, cannot be considered a very valuable auxiliary with which to supplement the supply of a town. We believe, says the *Maidstone Gazette*, it is intended to ask the Water Company if they are prepared to submit the water to an analysis, and we can only express the hope, in the interest of the town, that the analysis will take place before the impurities, which, it appears, may at any time be discharged from the reservoir, have had the opportunity to "settle." Maidstone enjoys many advantages, and generally figures more favourably than other towns in the Registrar-General's returns, but it is possible by the neglect of due precautions in the matter of water and drainage, to over-ride the natural advantages which the town possesses.

Uplowman (Tiverton).—Some shocking fever cases are reported from Uplowman, near Tiverton. It appears from the report of the medical officer of the district, brought before the Tiverton urban sanitary authority, that a family, consisting of a labouring man, his wife, and six of his children, who are under eleven years of age, inhabit a cottage at Uplowman containing a kitchen, pantry adjoining, and two bedrooms, partly divided by a lath and plaster partition, over. A few weeks ago, a son came home ill from Wales. He died on a Monday about three weeks ago, but no coffin was provided until the following Wednesday, and meanwhile exudations from the decomposing body ran through the ceiling and down the wall of the lower room. Before the corpse was buried three of the children were attacked with scarlet fever, and a short time afterwards the mother and the three other children were also stricken down with the fever. It was reported that the family obtained water from a well which was known to have been fouled by cattle. It was stated that the cottage was, apart from the fever, not fit for habitation.

THE USE OF A WELL.

TRAP *v.* BONNETT.

AT the County Court, Watford, on the 16th inst., an action was brought for payment for the use of a well, tubs, pails, &c.

The plaintiff in this case resided at Leavesden Green, and the defendant was a builder, at Watford. Defendant was doing bricklayer's work at some houses adjoining plaintiff's house, and being in want of water, his men had used plaintiff's well, tubs, &c.

Defendant admitted that his men had used the well for three days, but he said it was by permission of the plaintiff's wife. After that time he hired some one to procure water for the work, and paid 5*l.* for it.

Plaintiff said that defendant used the water during the dry season when water was very scarce at Leavesden. He charged only 3*s.* a day for the use of the well, but it was worth 5*s.* When his well was dry, they had to send a long way for water.

His Honour thought defendant ought to pay for the water and for the use of the tubs. Judgment for plaintiff for 25*s.*, to be paid in a fortnight.

THE SEWERAGE OF HUYTON AND ROBY.

THE existing sanitary condition of these townships being very unsatisfactory, the Parochial Committee have instructed Mr. T. Mellard Reade, Civil Engineer, Canning-chambers, Liverpool, to report to them as to the scheme he should recommend for completely sewering the district, and disposing of the sewage, and as to the probable cost. The townships are of that mixed rural and suburban character common in the vicinity of large towns. It is desired to carry out a comprehensive system that will meet prospective wants for a generation to come. There is certainly urgent need of action in the matter.

FREE LIBRARIES.

St. Pancras.—On Monday evening last a public meeting of the ratepayers of St. Pancras, convened by the Vestry, was held in the Vestry-hall, Mr. Churchwarden Coleing presiding, to determine whether the Free Public Libraries Act should be adopted for the establishment of a free library in the parish. Mr. Westacott moved a resolution in favour of such an institution, and Mr. Cremer seconded the motion. Mr. Palmer moved an amendment in opposition to the establishment of any such library. On a show of hands, the chairman declared that the number for the adoption of the Act was 117, and against it, 128. A division being demanded, it was reported that the voters for the adoption of the Act numbered 121, and against it, 150.

Islington.—A meeting was held at the Agricultural Hall on Tuesday evening last for the purpose of determining whether the Public Libraries and Museums Act should be adopted in the parish. Professor Leone Levi proposed a resolution that the Act should be adopted for the parish. After a noisy discussion, a "count-out" took place, which resulted in ayes, 338; noes, 1,435.

Glasgow.—A free library is to be established at Glasgow, by means of a bequest of the late Mr. Stephen Mitchell. A committee of the corporation has been appointed to carry out the scheme.

NEW STREET BETWEEN LEICESTER-SQUARE AND OXFORD-STREET.

AT the last ordinary weekly meeting of the Metropolitan Board of Works, Mr. Phillips introduced a numerous deputation from the vestry of St. Anne, Westminster, and a memorial was presented on the subject of improving the thoroughfares between Leicester-square and Oxford-street.

Dr. Rogers, on behalf of the deputation, said for years the subject of an improved street between Leicester-square and Oxford-street had been under consideration. It was proposed that Dean-street should be continued through Gerrard-street and Lisle-street over the site of Saville House right into the centre of Leicester-square. This improvement, he contended, could be accomplished by the removal of about six houses at the end of Macclesfield-street, which stood between Lisle-street and the site of Saville House.

Mr. H. L. Taylor asked if the parish of St. Anne was prepared to pay a moiety of the cost of this improvement?

Dr. Rogers said the locality had no means of taxing the ratepayers for the purpose of making this improvement. It would greatly benefit the district, but they were not prepared to contribute to the cost. Saville House could be purchased for 26,000*l.*, and the six houses for about 7,000*l.*; altogether the cost would be about 40,000*l.*

The memorial was referred to the Works Committee.

A WORKMEN'S CHAPEL AT THE SHAFTESBURY PARK ESTATE.

ON Saturday afternoon last the foundation-stone of a small chapel in connexion with the Primitive Methodists was laid on a piece of land in Greyshot-road, immediately adjoining the Shaftesbury Park Estate, Lavender-hill, Battersea. The building, to which it has been decided most absurdly to give the distinctive title of a "Workmen's Chapel," has been chiefly promoted by the residents on the Shaftesbury Park Estate, and the site adjoining the estate was secured in consequence of there being a clause in the company's deed preventing the erection of any church, chapel, or public-house on the estate itself. The architect who designed the building, the style of which is a mixed Gothic, is Mr. F. N. Pettingell, of Hull, the acting architect being Mr. A. J. Rouse, of Notting-hill.

A NEW BUILDING ESTATE AT PECKHAM.

THE large plot of land on the north side of Peckham, known as the Rosemary Branch Estate, which for several years past has been used as a cricket-field, and also for other out-door recreative purposes, is about to be laid out in streets for building purposes. The estate covers an area of several acres in extent, and a short time ago an effort was made by the inhabitants of the surrounding district to secure the ground for the public as one of the open spaces of the metropolis, in a neighbourhood where there is a dense population. The desirability of purchasing it, and laying out the grounds ornamentally, was discussed by the Camberwell Vestry, which eventually decided that they could not carry out the object, and the result is that the estate has been purchased by capitalists interested in building, and is immediately to be prepared for the erection of several streets of houses, which we understand are to be of a superior class. Tenders for the drainage

of the estate and the making of the roads have been received during the present week, and this portion of the work is at once to be commenced The estate has been laid out for the erection of about 250 houses, by Mr. W. A. Murphy, architect, of Camberwell, and when the buildings intended to be erected are completed, they will afford accommodation for a population of about 1,500.

ENLARGEMENT OF ST. SAVIOUR'S WORKHOUSE.

The guardians of St. Saviour's Union have been requested by the Local Government Board either considerably to enlarge their present workhouse in John-street West, or to erect new workhouse buildings on some other site, and at the meeting last week, when Dr. Bridges and Mr. Hedley, two of the Local Government Board Inspectors, were present, the question of a site for the additional buildings was for some time under discussion. The various plans which the Board had had under consideration were explained in detail by the chairman. It was ultimately decided to submit the plans of the John-street West site and the Newington site to the Local Government Board, together with the estimated cost of each, and to erect the new buildings on the site recommended by them.

UNION CHAPEL COMPETITION.

Union Chapel, Islington, is about to be rebuilt, at a cost of 15,000*l*. Seven competing architects have been selected, and fifty guineas will be paid to each of the unsuccessful competitors. The instructions have been prepared by Mr. A. Waterhouse, who has been retained by the committee as referee and consulting architect.

A set of instructions from the minister's point of view were sent with those prepared by Mr. Waterhouse, and to these we may refer on another occasion. The committee so far have certainly acted well.

THE MARGATE DRAINAGE COMPETITION.

At a special meeting of the Town Council of Margate, held on Tuesday last, "to consider the amended drainage plans submitted by Mr. Lewis Angell, C.E.," the borough surveyor (Mr. Albert Latham, C.E.) brought up a report which he had prepared thereon, dealing somewhat unfavourably with the amended plans; and, in answer to questions, refused to recommend the Council to adopt the amended plans. Consequently, the meeting separated without coming to any resolution upon the subject; and it is intimated that there is some probability of the amended plans being thrown out, and a conference of all the competitors being convened, to consult as to the manner in which the 300*l*. offered in premiums should be applied. The Council appear to be making a mess of the affair.

FIRES.

The underground fire, which has been the cause of great destruction in South Shields, has again broken out, and on Wednesday, the 18th inst., a dwelling-house was destroyed by the flames. The house was rendered unfit for human habitation some time ago, and was fortunately unoccupied at the time of the outbreak. Several other houses having been endangered, have been taken down for public safety.

St. Ives House, near Ringwood, the residence of Colonel Wright, of Nottingham, has been destroyed by fire. The fire, which commenced soon after midday, seems to have originated in the kitchen flue.

One of the most destructive fires which has taken place in Lincoln for several years past broke out on November 20th in the saw and planing mill belonging to Mr. Nusum. The damage is roughly estimated at from 8,000*l*. to 10,000*l*.

An extensive fire at Eastbourne took place on Tuesday night at the business premises of Mr. James Pearless, the well-known builder and member of the local Board, situate at the west end of Langney-road, and near its junction with Terminus-road. The whole of the buildings and extensive stock of seasoned timber were destroyed, and considerable damage was done to the adjoining premises of Messrs. Diplock, Son, & Peplow, the wine-merchants and brewers, and others. Mr. Pearless's loss, it is said, will amount to between 4,000*l*. and 5,000*l*. He is insured to the extent of 2,500*l*. in the County Fire Office. The damage to the malthouse and brewery is estimated at 1,500*l*. The workmen employed in the carpenters' shops are also great losers, the value of their tools consumed being little short of 300*l*.

An alarm of fire was raised during special services in the French parish church at Montreal, on the 9th inst., and the congregation made a rush for the doors. Three hundred people were trampled upon, and many of them were fatally injured.

THE LONDON GAS SUPPLY.

The Parliamentary notices for the ensuing session include particulars of three Bills, two of which are jointly promoted by the City Corporation and the Metropolitan Board of Works. One of the measures provides for the compulsory sale to the Corporation and the Board of Works of existing gas companies, and for the purchasing bodies to undertake the duty of supplying gas. The second Bill is to give the Corporation and the Board of Works power to construct gas-works at Barking Creek, Crossness, and Wormwood Scrubbs, and supply the commodity over the entire area of the metropolis, for which purpose leave will be sought to acquire land, make connecting railways, piers, and landing-places. The third Bill refers to arrangements for regulating the purity, pressure, and price of the gas, and the duties of public officers appointed to carry out the Act.

It is probably hopeless to expect that these measures will be carried next session, but we may see the beginning of a good end.

THE PRESSURE OF SEWER GAS.

Sir,—We are continually being treated to vague statements as to the pressure of sewer gas on the water seal of traps, and the density of air in sewers, but why do not some of our writers on these subjects give us some facts. It would be very simple for them to fix an ordinary gas-pressure water-gauge on a soil-pipe under and near the trap. If Mr. Henry Matthews, of Bristol, whom you quoted last week, would do this, and tell us the result, we should be able to test his assertion that the dip of 1 in. or 1½ in. in the trap is not sufficient to resist a pressure which he has probably never measured. Again, the exact pressure of gas in the sewer of which Mr. Matthews speaks might be ascertained with a barometer, after making allowance for difference of level. We do not deny the existence of the pressure, nor the importance of the subject, but we cannot remedy the evil until it has been diagnosed in a more accurate and scientific manner. L. & R.

P.S.—Mr. Matthews's statement that the temperature of our sewers is low, if intended to convey the impression that it is lower than that of the open streets, does not generally apply to London, as in winter the temperature in the sewers is much higher, and only during the hottest days in summer is it cooler.

COAL DUST.

In Belgium and in South Wales coal dust mixed with clay, water being added and formed into so-called *briquettes* in Belgium, is burnt in common fireplaces. In South Wales the fire is made up of these balls, piled close together, and the interior well packed with fuel early in the morning, and it lasts the whole day. The everlasting whitewash is payed over the front, and the whole left to burn at its leisure. A peculiar smell may arise from this way of burning the dust, but that is not cared for. N.

STOCKWELL GREEN.

Sir,—In your impression of Nov. 21st, you say in reference to Stockwell-green:—

"It appears now to be feared that in order to secure the Green it will be necessary to compensate those persons who have purchased plots from Mr. Honey for building upon, in addition to paying that gentleman the 4,000*l*. which he gave for the Green, although it was understood that the lots were let, and the contracts entered into, subject to their becoming inoperative by the Metropolitan Board taking possession of the Green."

To prevent misunderstanding hereafter, I beg to say the plots are *not* sold, but let on building agreements, and there is no such clause as you speak of in those agreements, neither has it ever been understood by the parties there that those agreements should be surrendered by the builders without compensation. Mr. Honey has not offered to sell the land in question to the Metropolitan Board of Works for 4,000*l*. I believe the price fixed by the present freeholders is a fair one. Yet it is well those interested in this matter should know that 4,000*l*. is not their price, and those making such statement are not correctly informed. J. C.

At the instance of a deputation from the Lambeth Vestry to the Metropolitan Board of Works, the Board has resolved "that steps be taken for the acquisition of Stockwell Green, with a view to its preservation as an open space, for the benefit of the metropolis."

THE LIFFEY.

Sir,—Accept my thanks for insertion in your paper of note relative to my proposed construction of "Tidal Ship Canals" across England and Ireland, so as to effect quicker and safer transit of the increasing traffic, and prevention of wrecks consequent on the present route round the coasts.

I have pleasure in adding that this practical project is receiving concurrence and support of a "Committee of Direction" for arrangement of preliminary matters in connexion with the object and purposes desired, and necessary for the future, full details and descriptions of the project will follow in due course, when more matured.

I was much gratified in reading report of proceedings in Dublin, relative to the "Liffey River Improvements by Dispollution from Sewage" (see *Times*, November 14), and which proceedings were no doubt induced, consequent on the able article on this subject in the *Builder*, October 31st, which had evidently stirred the Dublin men into action, after an immense waste of time in windy declamation and disagreement for many years past. It is to be sincerely hoped that the time has now arrived when the best plan which can possibly be found will be selected and adopted for carrying out this long deferred improvement of the Liffey, which much result in immense benefits to Dublin.

I have devoted considerable time and attention to this subject, and submitted plans of mine for practically removing the present evil, nuisance, and waste of sewage of Dublin, and which plans received marked approbation, but were deferred until more convenient time for real recognition and working. Meanwhile, the evils have continued increasing, until it has forced a necessity for immediate action. W. Austin, C.E.

POLLUTED WATER AT ACTON.

Mr. Hemsley, clerk of the Acton Local Board, applied to Mr. Bridge (Hammersmith) for summonses under an "Act to amend and extend the Sanitary Laws," passed last session. He said his application was of a peculiar kind, and the first which had been made in the metropolis. The words of the Act were, that "if it should be reported to any sanitary authority that within the district any water in a well is polluted and injurious to health, they may apply to a justice for an order to remedy the same." In the parish of Acton there were three public pumps, the water of which was pollated and injurious to health. He proposed to summon one person interested in each of these pumps.

Mr. Bridge wished to know in whom the pumps were vested.

Mr. Hemsley said he did not know. He submitted that it was immaterial, as the Act used the words "any water which was injurious to health." Then the authority may apply. The Acton Local Board wished to prevent the water from being drunk.

Mr. Bridge said it was a matter which ought not to be delayed. He was thinking who would be the best persons to proceed against.

Mr. Hemsley said if it was a private pump he should have no difficulty. He was not prepared to say that the pumps were not vested in the Local Board.

Mr. Bridge: Let a summons issue against some member of the Board, and those who are interested in the pumps.

Mr. Hemsley said it was hardly necessary to issue a summons against the Board, as they wished to close the pumps.

Mr. Bridge granted the summons against persons who were owners of land near the pumps.

AN ACTION ON A QUESTION OF MEASUREMENT.

At the Lord Mayor's Court, on Wednesday, 18th inst., before Sir T. Chambers, M.P., Common Serjeant, and a jury, in the case of M'Laren *v.* Bent, considerable difference of opinion was expressed as to the meaning of the term "running foot." The plaintiff sought to recover the sum of 17*l*. 15*s*. for two ornamental iron-work coil cases supplied to the defendant for the purpose of covering some exposed coils of an apparatus for warming his house by hot water.

The plaintiff, an ironfounder, carrying on business in Upper Thames-street, and having a foundry also in Scotland, said that with reference to the cases which were supplied to the defendant at 23*s*. 6*d*. per foot, they were measured and charged for at so much per "running foot," the measurement including the sides of the cases. That was the universal custom in the trade. Iron-work cases were always charged for by the running foot, which included the two sides and the front, and not by the length of the case.

Charles Kennell, in the employ of the plaintiff, said that, from many years' experience in the iron trade, it was his belief that the practice in measuring ironwork was to measure curves, projections, or indentations, and not simply to take the length of the work. He had always measured and charged by the running foot, as in the present instance. The cases supplied to the defendant were charged according to the price agreed upon when the order was given.

Mr. Henry Bent (the defendant) said that he resided at Norwood. The house in which he lived was fitted up with a hot-water warming apparatus. There were two recesses of 4 ft. 3 in. each between the windows, where the apparatus was exposed, and it was to cover them that he ordered two coil-cases of the plaintiff. They were ordered in March last, and he had prepared his room to receive them, but the cases were not sent home until June; they were scratched, and were not put together, but were in seven or eight pieces; and although charged in excess of the stipulated sum, they were inferior to the quality ordered. He chief objection, however, was to the charge made in the number of feet. The plaintiff had charged for the case at 23s. 6d. per "running foot," instead of 22s. 6d. per foot for the length which was the price agreed upon, and which was done at other houses.

Henry Ratcliffe said he lived at Sydenham, and was a gas and hot water pipe engineer. Had been employed at the Crystal Palace, the Agricultural Hall, and other places. He had bought a great many coil-cases, but their measures had always been taken along the front only. He had never bought by the running foot.

After some further evidence, and his lordship's remarks on the case, the jury returned a verdict for the plaintiff for the full amount claimed.

MONUMENTAL.

Monument to Admiral Sir G. Seymour.—Among the guests who have accompanied her Royal Highness the Princess Helena and Prince Christian on a visit to the Marquis of Hertford, at Ragley, are Count and Countess Gleichen. The Count is brother-in-law of the Marquis, and a cousin of the Queen, and his real title is Prince of Hohenlohe, but as he married a lady of not royal birth, he was told that she could not be received as Princess, and he thereupon declared that he should adopt his lower title. Of late the Count has devoted himself to sculpture. Among his more recent works is a monumental recumbent figure of his father-in-law, Admiral Sir George Seymour, who was father of the present Marquis of Hertford. The monument has been placed in Ragley Church.

Monument to the Earl of Dufferin.—The Earl of Dufferin has attained the rare honour of having his statue erected during his life-time. He is by far the most popular Governor-General whom the Canadians have had since Lord Elgin, and the citizens of Montreal esteem him so highly that they have commissioned Mr. Millmore, a Transatlantic sculptor, but now in Rome, to execute a life-size statue of the Viceroy, at a cost of 2,000*l.*

ACCIDENTS.

Pug-mill Accident near Durham.—An inquest was held on Thursday, the 19th inst., at the Durham County Hospital, on the body of Joseph Rhodes, brick labourer, who died on the 17th inst., at the Hospital. Rhodes was engaged feeding the pug-mill at the Coxhoe Brick Works, when his coat caught in the clutch, and he was drawn in, the upper part of his body being dreadfully mutilated, insomuch so that he died shortly after being received in the hospital. A verdict of accidental death was returned.

Accident in a Brickyard, Fenn's Bank.—Mr. E. Blackburne held an inquest last week upon a man named Joseph Chesters. On Monday, November 9th, the deceased was at work in the brick and tile yard, cutting a chamber, when eight or ten tons of clay fell upon him and killed him almost instantly. He had been at work in the yard about four months, and was said to know his work well, but one of the witnesses called was of opinion that the deceased was rather too venturesome. Verdict of accidental death.

Serious Boiler Explosion.—Four men and two children were seriously injured by the explosion of a boiler at Oaktree Colliery, Aberdeen, on Tuesday, 17th inst.

Fatal Result from the Fall of a Wall.—An inquest was held last Thursday, at the Eastbourne Union-house, before Mr. L. G. Fullagar, on the body of Samuel Douch, a labourer, who met with his death under the following circumstances. Jane Douch said deceased was her husband, aged 49. On Friday last he left home at half-past six to go to work. She did not see him again till he was hurt by the bricks falling on him. He said he was removing the bricks from the tank. Alfred Berry said the deceased and he were pulling down the brickwork of the old tank at the railway station. A little piece, about 3 ft., broke off and did not fall, but remained on the top, loose; deceased took an iron bar and knocked ten or a dozen bricks to let this piece down. The piece pitched over and caught him, knocking him off the wall; the brickwork rolled off him, and he got up. Verdict "That deceased died from the shock to the system, and the wound caused by the fall of a portion of a wall."

Fall from a Scoffold.—Walter Scarratt, a joiner, employed at some new buildings in Hanley, on the 13th inst., fell from a scaffold, and was severely injured on the head. He was taken to the infirmary, where he became insensible from effusion of blood on the brain, and died on Saturday. At an inquest, held before Mr. Booth, coroner, on Tuesday, the jury returned a verdict of accidental death.

Accident at Avonmouth Docks.—On Thursday, the 19th inst., the deputy county coroner, Mr. C. Scott, held an inquest at the George Inn, Shirehampton, touching the death of James Coleman, twenty-six years of age, a mason, who died on Monday evening from injuries received at Avonmouth Docks that afternoon. Elisha Knepton, a ganger, stated that on the day in question the deceased was engaged in building a wall. The carpenters required some timber for the purpose of lengthening a "gantling." A piece of timber some 30 ft. long was hitched to the crane, and was lifted up some 16 ft. to pass over some wagons that were in the way. A signal was given for the men to clear out of the way; but the back legs of the crane being lower than the centre one, the timber swung round rather quicker than was expected, and it came in contact with the wall; the nippers to which the timber was attached became unhitched, and the balk of timber fell to the ground. In its fall the timber "canted" from off one of the supports of the "gantling" and struck the deceased causing him to fall. Several men who were near the place caught hold of the deceased before he fell a second time. Witness explained to the jury that the timber, after it struck the deceased, rolled off his back on to the ground. The nippers on this occasion were not timber nippers, but ones used to lift stone. John Smith proved picking up the deceased after he was knocked down, and said that, with assistance, he conveyed him on a stretcher to the railway station; but deceased expired shortly after his arrival there. Verdict, accidental death.

Fall of a Building at Whitworth.—On Wednesday, the 18th inst., a large building, which had been previously occupied as a stable, and more recently by Mr. J. Chadwick, joiner, fell with a tremendous crash, and without a moment's warning. Mr. Chadwick was in his place at the time, in company with a nephew, who was his apprentice, and his niece, who had gone there to play. The noise of falling material attracted attention, and Mr. Chadwick and his nephew and niece, who had fortunately been standing on a parlour floor which had not given way, were rescued from their dangerous position. It was then found that the nephew had been knocked down by the falling material, and his foot was caught between a joist and the flooring. He, however, sustained very slight injuries. The little girl was found lying with her head on her arms, not having sustained any injury; and Mr. Chadwick only suffered from the shock to his nervous system. One part of the building was very old, and the ends of some of the beams were completely rotten.

SCHOOL BUILDING NEWS.

Middlesbrough.—On the 19th inst. the foundation-stone of the new St. John's School, Middlesbrough, was laid by Mrs. W. R. I. Hopkins, of Grey Towers, near Middlesbrough. The new schools will only be at the distance of five minutes' walk from the old schools near the Exchange, will be close to St. John's Church, and will accommodate about 1,000 children, or 300 more than the old schools. The site has frontages into two streets, Bright-street and Russell-street, the main frontage, which is 245 ft. in length, being in the former. The architects are Messrs. Alexander & Henman, of Middlesbrough and Stockton. On the site of the old schools will be erected a new post and telegraph office.

Newport.—On Monday evening, November 16, a meeting of the subscribers to the building fund of these schools was held in the Marsh Trustees' Room. The Rev. D. Mountfield (chairman) said the meeting was called to hear an account of how the money raised for building the new schools had been expended. He now held the certificate of the Education Department certifying that sufficient school accommodation had been provided for the Newport district. The building cost upwards of 2,000*l.*, and this large amount had been voluntarily collected and subscribed. Mr. T. C. Bird (hon. sec.) then read the account, from which it appeared that the total receipts were 1,953*l.* 7s. 4d. The expenditure was—Builder, architect, and gas-fittings, 1,683*l.* 18s. 9d.; printing, legal charges, surveys, and petty expenses, 67*l.* 12s. 9d.; value of the site given, 200*l.*; leaving a balance in the treasurer's hands of 1*l.* 15s. 10d.

Odiham.—The first meeting under the new scheme of the Governing Body of the Odiham Endowed School was held on the 17th day of November last. Plans of the proposed new school buildings were submitted to the Governors by Mr. Woodthorpe, of Coleman-street Buildings, London, and having been considered satisfactory were adopted, subject to the approval of the Endowed School Commissioners. The proposed buildings, which will present a handsome frontage, will include a master's residence, with all necessary out-offices, &c., a large and lofty school-room, class-rooms, dining-rooms, and dormitories, and will be a great ornament to the town when completed.

Northwich.—The question of supplying a deficiency of Sunday-school accommodation in connexion with the Congregational Church at Northwich, has for some time engaged the attention of the leading members of that denomination. Hitherto a school has been held in the room adjoining the Town Bridge, and another in the premises in Witton that were formerly used as a day-school. The latter place was found to be quite inadequate to the requirements of that thickly-populated neighbourhood, and the energy of the principal members of the congregation has resulted in the erection of a commodious building, with a frontage in the main street, in what was previously the playground of the day-school, the old building having been converted into infant and adult class-rooms. The erection of the building has been carried out by Mr. W. Leicester, of Northwich, from designs prepared by Mr. S. Drinkwater, of Witton, at a total cost of 1,225*l.*, including the purchase of the site, and the furnishings. The large room is 65 ft. long by 25 ft. wide. There are also two new class-rooms, a library, and other appurtenances. The old school-room could not boast of high architectural qualities externally, and internally, when occupied by 150 children on a warm summer's afternoon, could scarcely come under the present sanitary requirements in the cubic space it contained. Mr. Hurst, as treasurer of the building fund, gave some particulars of the finances. As nearly as he could ascertain, the total expenditure would amount to about 1,225*l.*, of which 930*l.* had been collected, leaving 290*l.* to be raised. Mr. Thomas had promised to reduce that sum by 50*l.* conditionally that they realised the whole amount during the current year. Thanks were due to Mr. Leicester, the contractor, and Mr. Drinkwater, the architect, for the excellent way in which they carried out their undertaking.

Leeds.—A new school-room has been opened at Knostrop, in the parish of St. Saviour's, by the Rev. Dr. Gott.

CHURCH BUILDING NEWS.

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COAL DUST.

In Belgium and in South Wales coal dust mixed with clay, water being added and formed into so-called *briquettes* in Belgium, is burnt in common fireplaces. In South Wales the fire is made up of these balls, piled close together, and the interior well packed with fuel early in the morning, and it lasts the whole day. The everlasting whitewash is payed over the front, and the whole left to burn at its leisure. A peculiar smell may arise from this way of burning the dust, but that is not cared for. N.

STOCKWELL GREEN.

Sir,—In your impression of Nov. 21st, you say in reference to Stockwell-green:—

"It appears now to be feared that in order to secure the Green it will be necessary to compensate those persons who have purchased plots from Mr. Honey for building upon, in addition to paying that gentleman the 4,000*l.* which he gave for the Green, although it was understood that the lots were let, and the contracts entered into, subject to their becoming inoperative by the Metropolitan Board taking possession of the Green."

To prevent misunderstanding hereafter, I beg to say the plots are *not* sold, but let on building agreements, and there is no such clause as you speak of in those agreements, neither has it ever been understood by the parties there that those agreements should be surrendered by the builders without compensation. Mr. Honey has not offered to sell the land in question to the Metropolitan Board of Works for 4,000*l.* I believe the price fixed by the present freeholders is a fair one. Yet it is well those interested in this matter should know that 4,000*l.* is not their price, and those making such statement are not correctly informed. J. C.

At the instance of a deputation from the Lambeth Vestry to the Metropolitan Board of Works, the Board has resolved "that steps be taken for the acquisition of Stockwell Green, with a view to its preservation as an open space, for the benefit of the metropolis."

THE LIFFEY.

Sir,—Accept my thanks for insertion in your paper of note relative to my proposed construction of "Tidal Ship Canals" across England and Ireland, so as to effect quicker and safer transit of the increasing traffic, and prevention of wrecks consequent on the present route round the coasts.

I have pleasure in adding that this practical project is receiving concurrence and support of a "Committee of Direction" for arrangement of preliminary matters in connexion with the object and purposes desired, and necessary for the future, full details and descriptions of the project will follow in due course, when more matured.

I was much gratified in reading report of proceedings in Dublin, relative to the "Liffey River Improvements by Dispollution from Sewage" (see *Times*, November 14), and which proceedings were no doubt indueed, consequent on the able article on this subject in the *Builder*, October 31st, which had evidently stirred the Dublin men into action, after an immense waste of time in windy declamation and disagreement for many years past. It is to be sincerely hoped that the time has now arrived when the best plan which can possibly be found will be selected and adopted for carrying out this long deferred improvement of the Liffey, which much result in immense benefits to Dublin.

I have devoted considerable time and attention to this subject, and submitted plans of mine for practically removing the present evil, nuisance, and waste of sewage of Dublin, and which plans received marked approbation, but were deferred until more convenient time for real recognition and working. Meanwhile, the evils have continued increasing, until it has forced a necessity for immediate action. W. Austin, C.E.

POLLUTED WATER AT ACTON.

Mr. Hemsley, clerk of the Acton Local Board, applied to Mr. Bridge (Hammersmith) for summonses under an "Act to amend and extend the Sanitary Laws," passed last session. He said his application was of a peculiar kind, and the first which had been made in the metropolis. The words of the Act were, that "if it should be reported to any sanitary authority that within the district any water in a well is polluted and injurious to health, they may apply to a justice for an order to remedy the same." In the parish of Acton there were three public pumps, the water of which was polluted and injurious to health. He proposed to summon one person interested in each of these pumps.

Mr. Bridge wished to know in whom the pumps were vested.

Mr. Hemsley said he did not know. He submitted that it was immaterial, as the Act used the words "any water which was injurious to health." Then the authority may apply. The Acton Local Board wished to prevent the water from being drunk.

Mr. Bridge said it was a matter which ought not to be delayed. He was thinking who would be the best persons to proceed against.

Mr. Hemsley said if it was a private pump he should have no difficulty. He was not prepared to say that the pumps were not vested in the Local Board.

Mr. Bridge: Let a summons issue against some member of the Board, and those who are interested in the pumps.

Mr. Hemsley said it was hardly necessary to issue a summons against the Board, as they wished to close the pumps.

Mr. Bridge granted the summons against persons who were owners of land near the pumps.

AN ACTION ON A QUESTION OF MEASUREMENT.

At the Lord Mayor's Court, on Wednesday, 18th inst., before Sir T. Chambers, M.P., Common Serjeant, and a jury, in the case of M'Laren *v.* Bent, considerable difference of opinion was expressed as to the meaning of the term "running foot." The plaintiff sought to recover the sum of 17*l.* 15*s.* for two ornamental iron-work coil cases supplied to the defendant for the purpose of covering some exposed coils of an apparatus for warming his house by hot water.

The plaintiff, an ironfounder, carrying on business in Upper Thames-street, and having a foundry also in Scotland, said that with reference to the cases which were supplied to the defendant at 23*s.* 6*d.* per foot, they were measured and charged for at so much per "running foot," the measurement including the sides of the cases. That was the universal custom in the trade. Iron-work cases were always charged for by the running foot, which included the two sides and the front, and not by the length of the case.

Charles Kennell, in the employ of the plaintiff, said that, from many years' experience in the iron trade, it was his belief that the practice in measuring ironwork was to measure curves, projections, or indentations, and not simply to take the length of the work. He had always measured and charged by the running foot, as in the present instance. The cases supplied to the defendant were charged according to the price agreed upon when the order was given.

Mr. Henry Bent (the defendant) said that he resided at Norwood. The house in which he lived was fitted up with a hot-water warming apparatus. There were two recesses of 4 ft. 3 in. each between the windows, where the apparatus was exposed, and it was to cover them that he ordered two coil-cases of the plaintiff. They were ordered in March last, and he had prepared his room to receive them, but the cases were not sent home until June; they were scratched, and were not put together, but were in seven or eight pieces; and although charged in excess of the stipulated sum, they were inferior to the quality ordered. He chief objection, however, was to the charge made in the number of feet. The plaintiff had charged for the case at 23s. 6d. per "running foot," instead of 22s. 6d. per foot for the length which was the price agreed upon, and which was done at other houses.

Henry Ratcliffe said he lived at Sydenham, and was a gas and hot water pipe engineer. Had been employed at the Crystal Palace, the Agricultural Hall, and other places. He had bought a great many coil-cases, but their measures had always been taken along the front only. He had never bought by the running foot.

After some further evidence, and his lordship's remarks on the case, the jury returned a verdict for the plaintiff for the full amount claimed.

MONUMENTAL.

Monument to Admiral Sir G. Seymour.—Among the guests who have accompanied her Royal Highness the Princess Helena and Prince Christian on a visit to the Marquis of Hertford, at Ragley, are Count and Countess Gleichen. The Count is brother-in-law of the Marquis, and a cousin of the Queen, and his real title is Prince of Hohenlohe, but as he married a lady of not royal birth, he was told that she could not be received as Princess, and he thereupon declared that he should adopt his lower title. Of late the Count has devoted himself to sculpture. Among his more recent works is a monumental recumbent figure of his father-in-law, Admiral Sir George Seymour, who was father of the present Marquis of Hertford. The monument has been placed in Ragley Church.

Monument to the Earl of Dufferin.—The Earl of Dufferin has attained the rare honour of having his statue erected during his life-time. He is by far the most popular Governor-General whom the Canadians have had since Lord Elgin, and the citizens of Montreal esteem him so highly that they have commissioned Mr. Millmore, a Transatlantic sculptor, but now in Rome, to execute a life-size statue of the Viceroy, at a cost of 2,000*l.*

ACCIDENTS.

Pug-mill Accident near Durham.—An inquest was held on Thursday, the 19th inst., at the Durham County Hospital, on the body of Joseph Rhodes, brick labourer, who died on the 17th inst., at the Hospital. Rhodes was engaged feeding the pug-mill at the Coxhoe Brick Works, when his coat caught in the clutch, and he was drawn in, the upper part of his body being dreadfully mutilated, insomuch so that he died shortly after being received in the hospital. A verdict of accidental death was returned.

Accident in a Brickyard, Fenn's Bank.—Mr. E. Blackburne held an inquest last week upon a man named Joseph Chesters. On Monday, November 9th, the deceased was at work in the brick and tile yard, cutting a chamber, when eight or ten tons of clay fell upon him and killed him almost instantly. He had been at work in the yard about four months, and was said to know his work well, but one of the witnesses called was of opinion that the deceased was rather too venturesome. Verdict of accidental death.

Serious Boiler Explosion.—Four men and two children were seriously injured by the explosion of a boiler at Oaktree Colliery, Aberdeen, on Tuesday, 17th inst.

Fatal Result from the Fall of a Wall.—An inquest was held last Thursday, at the Eastbourne Union-house, before Mr. L. G. Fullagar, on the body of Samuel Douch, a labourer, who met with his death under the following circumstances. Jane Douch said deceased was her husband, aged 49. On Friday last he left home at half-past six to go to work. She did not see him again till he was hurt by the bricks falling on him. He said he was removing the bricks from the tank. Alfred Berry said the deceased and he were pulling down the brickwork of the old tank at the railway station. A little piece, about 3 ft., broke off and did not fall, but remained on the top, loose; deceased took an iron bar and knocked ten or a dozen bricks to let this piece down. The piece pitched over and caught him, knocking him off the wall; the brickwork rolled off him, and he got up. Verdict "That deceased died from the shock to the system, and the wound caused by the fall of a portion of a wall."

Fall from a Scafold.—Walter Scarratt, a joiner, employed at some new buildings in Hanley, on the 13th inst., fell from a scaffold, and was severely injured on the head. He was taken to the infirmary, where he became insensible from effusion of blood on the brain, and died on Saturday. At an inquest, held before Mr. Booth, coroner, on Tuesday, the jury returned a verdict of accidental death.

Accident at Avonmouth Docks.—On Thursday, the 19th inst., the deputy county coroner, Mr. C. Scott, held an inquest at the George Inn, Shirehampton, touching the death of James Coleman, twenty-six years of age, a mason, who died on Monday evening from injuries received at Avonmouth Docks that afternoon. Elisha Knepton, a ganger, stated that on the day in question the deceased was engaged in building a wall. The carpenters required some timber for the purpose of lengthening a "gantling." A piece of timber some 30 ft. long was hitched to the crane, and was lifted up some 16 ft. to pass over some wagons that were in the way. A signal was given for the men to clear out of the way; but the back legs of the crane being lower than the centre one, the timber swung round rather quicker than was expected, and it came in contact with the wall; the nippers to which the timber was attached became unhitched, and the balk of timber fell to the ground. In its fall the timber "canted" from off one of the supports of the "gantling" and struck the deceased causing him to fall. Several men who were near the place caught hold of the deceased before he fell a second time. Witness explained to the jury that the timber, after it struck the deceased, rolled off his back on to the ground. The nippers on this occasion were not timber nippers, but ones used to lift stone. John Smith proved picking up the deceased after he was knocked down, and said that, with assistance, he conveyed him on a stretcher to the railway station; but deceased expired shortly after, his arrival there. Verdict, accidental death.

Fall of a Building at Whitworth—On Wednesday, the 18th inst., a large building, which had been previously occupied as a stable, and more recently by Mr. J. Chadwick, joiner, fell with a tremendous crash, and without a moment's warning. Mr. Chadwick was in his place at the time, in company with a nephew, who was his apprentice, and his niece, who had gone there to play. The noise of falling material attracted attention, and Mr. Chadwick and his nephew and niece, who had fortunately been standing on a parlour floor which had not given way, were rescued from their dangerous position. It was then found that the nephew had been knocked down by the falling material, and his foot was caught between a joist and the flooring. He, however, sustained very slight injuries. The little girl was found lying with her head on her arms, not having sustained any injury; and Mr. Chadwick only suffered from the shock to his nervous system. One part of the building was very old, and the ends of some of the beams were completely rotten.

SCHOOL BUILDING NEWS.

Middlesbrough.—On the 19th inst. the foundation-stone of the new St. John's School, Middlesbrough, was laid by Mrs. W. R. I. Hopkins, of Grey Towers, near Middlesbrough. The new schools will only be at the distance of five minutes' walk from the old schools near the Exchange, will be close to St. John's Church, and will accommodate about 1,000 children, or 300 more than the old schools. The site has frontages into two streets, Bright-street and Russell-street, the main frontage, which is 245 ft. in length, being in the former. The architects are Messrs. Alexander & Henman, of Middlesbrough and Stockton. On the site of the old schools will be erected a new post and telegraph office.

Newport.—On Monday evening, November 16, a meeting of the subscribers to the building fund of these schools was held in the Marsh Trustees' Room. The Rev. D. Mountfield (chairman) said the meeting was called to hear an account of how the money raised for building the new schools had been expended. He now held the certificate of the Education Department certifying that sufficient school accommodation had been provided for the Newport district. The building cost upwards of 2,000*l.*, and this large amount had been voluntarily collected and subscribed. Mr. T. C. Bird (hon. sec.) then read the account, from which it appeared that the total receipts were 1,953*l.* 7s. 4d. The expenditure was—Builder, architect, and gas-fittings, 1,683*l.* 18s. 9d.; printing, legal charges, surveys, and petty expenses, 67*l.* 12s. 9d.; value of the site given, 200*l.*; leaving a balance in the treasurer's hands of 1*l.* 15s. 10d.

Odiham.—The first meeting under the new scheme of the Governing Body of the Odiham Endowed School was held on the 17th day of November last. Plans of the proposed new school buildings were submitted to the Governors by Mr. Woodthorpe, of Coleman-street Buildings, London, and having been considered satisfactory were adopted, subject to the approval of the Endowed School Commissioners. The proposed buildings, which will present a handsome frontage, will include a master's residence, with all necessary out-offices, &c., a large and lofty school-room, class-rooms, dining-rooms, and dormitories, and will be a great ornament to the town when completed.

Northwich.—The question of supplying a deficiency of Sunday-school accommodation in connexion with the Congregational Church at Northwich, has for some time engaged the attention of the leading members of that denomination. Hitherto a school has been held in the room adjoining the Town Bridge, and another in the premises in Witton that were formerly used as a day-school. The latter place was found to be quite inadequate to the requirements of that thickly-populated neighbourhood, and the energy of the principal members of the congregation has resulted in the erection of a commodious building, with a frontage in the main street, in what was previously the playground of the day-school, the old building having been converted into infant and adult class-rooms. The erection of the building has been carried out by Mr. W. Leicester, of Northwich, from designs prepared by Mr. S. Drinkwater, of Witton, at a total cost of 1,225*l.*, including the purchase of the site, and the furnishings. The large room is 65 ft. long by 25 ft. wide. There are also two new class-rooms, a library, and other appurtenances. The old school-room could not boast of high architectural qualities externally, and internally, when occupied by 150 children on a warm summer's afternoon, could scarcely come under the present sanitary requirements in the cubic space it contained. Mr. Hurst, as treasurer of the building fund, gave some particulars of the finances. As nearly as he could ascertain, the total expenditure would amount to about 1,225*l.*, of which 930*l.* had been collected, leaving 290*l.* to be raised. Mr. Thomas had promised to reduce that sum by 50*l.* conditionally that they realised the whole amount during the current year. Thanks were due to Mr. Leicester, the contractor, and Mr. Drinkwater, the architect, for the excellent way in which they carried out their undertaking.

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P.S.—Mr. Matthews's statement that the temperature of our sewers is low, if intended to convey the impression that it is lower than that of the open streets, does not generally apply to London, as in winter the temperature in the sewers is much higher, and only during the hottest days in summer is it cooler.

COAL DUST.

In Belgium and in South Wales coal dust mixed with clay, water being added and formed into so-called *briquettes* in Belgium, is burnt in common fireplaces. In South Wales the fire is made up of these balls, piled close together, and the interior well packed with fuel early in the morning, and it lasts the whole day. The everlasting whitewash is payed over the front, and the whole left to burn at its leisure. A peculiar smell may arise from this way of burning the dust, but that is not cared for. N.

STOCKWELL GREEN.

Sir,—In your impression of Nov. 21st, you say in reference to Stockwell-green:—

"It appears now to be feared that in order to secure the Green it will be necessary to compensate those persons who have purchased plots from Mr. Honey for building upon, in addition to paying that gentleman the 4,000*l.* which he gave for the Green, although it was understood that the lots were let, and the contracts entered into, subject to their becoming inoperative by the Metropolitan Board taking possession of the Green."

To prevent misunderstanding hereafter, I beg to say the plots are *not* sold, but let on building agreements, and there is no such clause as you speak of in those agreements, neither has it ever been understood by the parties there that those agreements should be surrendered by the builders without compensation. Mr. Honey has not offered to sell the land in question to the Metropolitan Board of Works for 4,000*l.* I believe the price fixed by the present freeholders is a fair one. Yet it is well those interested in this matter should know that 4,000*l.* is not their price, and those making such statement are not correctly informed. J. C.

At the instance of a deputation from the Lambeth Vestry to the Metropolitan Board of Works, the Board has resolved "that steps be taken for the acquisition of Stockwell Green, with a view to its preservation as an open space, for the benefit of the metropolis."

THE LIFFEY.

Sir,—Accept my thanks for insertion in your paper of note relative to my proposed construction of "Tidal Ship Canals" across England and Ireland, so as to effect quicker and safer transit of the increasing traffic, and prevention of wrecks consequent on the present route round the coasts.

I have pleasure in adding that this practical project is receiving concurrence and support of a "Committee of Direction" for arrangement of preliminary matters in connexion with the object and purposes desired, and necessary for the future, full details and descriptions of the project will follow in due course, when more matured.

I was much gratified in reading report of proceedings in Dublin, relative to the "Liffey River Improvements by Dispollution from Sewage" (see *Times*, November 14), and which proceedings were no doubt induced, consequent on the able article on this subject in the *Builder*, October 31st, which had evidently stirred the Dublin men into action, after an immense waste of time in windy declamation and disagreement for many years past. It is to be sincerely hoped that the time has now arrived when the best plan which can possibly be found will be selected and adopted for carrying out this long deferred improvement of the Liffey, which much result in immense benefits to Dublin.

I have devoted considerable time and attention to this subject, and submitted plans of mine for practically removing the present evil, nuisance, and waste of sewage of Dublin, and which plans received marked approbation, but were deferred until more convenient time for real recognition and working. Meanwhile, the evils have continued increasing, until it has forced a necessity for immediate action. W. Austin, C.E.

POLLUTED WATER AT ACTON.

Mr. Hemsley, clerk of the Acton Local Board, applied to Mr. Bridge (Hammersmith) for summonses under an "Act to amend and extend the Sanitary Laws," passed last session. He said his application was of a peculiar kind, and the first which had been made in the metropolis. The words of the Act were, that "if it should be reported to any sanitary authority that within the district any water in a well is polluted and injurious to health, they may apply to a justice for an order to remedy the same." In the parish of Acton there were three public pumps, the water of which was polluted and injurious to health. He proposed to summon one person interested in each of these pumps.

Mr. Bridge wished to know in whom the pumps were vested.

Mr. Hemsley said he did not know. He submitted that it was immaterial, as the Act used the words "any water which was injurious to health." Then the authority may apply. The Acton Local Board wished to prevent the water from being drunk.

Mr. Bridge said it was a matter which ought not to be delayed. He was thinking who would be the best persons to proceed against.

Mr. Hemsley said if it was a private pump he should have no difficulty. He was not prepared to say that the pumps were not vested in the Local Board.

Mr. Bridge: Let a summons issue against some member of the Board, and those who are interested in the pumps.

Mr. Hemsley said it was hardly necessary to issue a summons against the Board, as they wished to close the pumps.

Mr. Bridge granted the summons against persons who were owners of land near the pumps.

AN ACTION ON A QUESTION OF MEASUREMENT.

At the Lord Mayor's Court, on Wednesday, 18th inst., before Sir T. Chambers, M.P., Common Serjeant, and a jury, in the case of M'Laren *v.* Bent, considerable difference of opinion was expressed as to the meaning of the term "running foot." The plaintiff sought to recover the sum of 17*l.* 15*s.* for two ornamental iron-work coil cases supplied to the defendant for the purpose of covering some exposed coils of an apparatus for warming his house by hot water.

The plaintiff, an ironfounder, carrying on business in Upper Thames-street, and having a foundry also in Scotland, said that with reference to the cases which were supplied to the defendant at 22*s.* 6*d.* per foot, they were measured and charged for at so much per "running foot," the measurement including the sides of the cases. That was the universal custom in the trade. Iron-work cases were always charged for by the running foot, which included the two sides and the front, and not by the length of the case.

Charles Kennell, in the employ of the plaintiff, said that, from many years' experience in the iron trade, it was his belief that the practice in measuring ironwork was to measure curves, projections, or indentations, and not simply to take the length of the work. He had always measured and charged by the running foot, as in the present instance. The cases supplied to the defendant were charged according to the price agreed upon when the order was given.

Mr. Henry Bent (the defendant) said that he resided at Norwood. The house in which he lived was fitted up with a hot-water warming apparatus. There were two recesses of 4 ft. 3 in. each between the windows, where the apparatus was exposed, and it was to cover them that he ordered two coil-cases of the plaintiff. They were ordered in March last, and he had prepared his room to receive them, but the cases were not sent home until June; they were scratched, and were not put together, but were in seven or eight pieces; and although charged in excess of the stipulated sum, they were inferior to the quality ordered. He chief objection, however, was to the charge made in the number of feet. The plaintiff had charged for the case at 23s. 6d. per "running foot," instead of 22s. 6d. per foot for the length which was the price agreed upon, and which was done at other houses.

Henry Ratcliffe said he lived at Sydenham, and was a gas and hot water pipe engineer. Had been employed at the Crystal Palace, the Agricultural Hall, and other places. He had bought a great many coil-cases, but their measures had always been taken along the front only. He had never bought by the running foot.

After some further evidence, and his lordship's remarks on the case, the jury returned a verdict for the plaintiff for the full amount claimed.

MONUMENTAL.

Monument to Admiral Sir G. Seymour.—Among the guests who have accompanied her Royal Highness the Princess Helena and Prince Christian on a visit to the Marquis of Hertford, at Ragley, are Count and Countess Gleichen. The Count is brother-in-law of the Marquis, and a cousin of the Queen, and his real title is Prince of Hohenlohe, but as he married a lady of not royal birth, he was told that she could not be received as Princess, and he thereupon declared that he should adopt his lower title. Of late the Count has devoted himself to sculpture. Among his more recent works is a monumental recumbent figure of his father-in-law, Admiral Sir George Seymour, who was father of the present Marquis of Hertford. The monument has been placed in Ragley Church.

Monument to the Earl of Dufferin.—The Earl of Dufferin has attained the rare honour of having his statue erected during his life-time. He is by far the most popular Governor-General whom the Canadians have had since Lord Elgin, and the citizens of Montreal esteem him so highly that they have commissioned Mr. Millmore, a Transatlantic sculptor, but now in Rome, to execute a life-size statue of the Viceroy, at a cost of 2,000*l.*

ACCIDENTS.

Pug-mill Accident near Durham.—An inquest was held on Thursday, the 19th inst., at the Durham County Hospital, on the body of Joseph Rhodes, brick labourer, who died on the 17th inst., at the Hospital. Rhodes was engaged feeding the pug-mill at the Coxhoe Brick Works, when his coat caught in the clutch, and he was drawn in, the upper part of his body being dreadfully mutilated, insomuch so that he died shortly after being received in the hospital. A verdict of accidental death was returned.

Accident in a Brickyard, Fenn's Bank.—Mr. E. Blackburne held an inquest last week upon a man named Joseph Chesters. On Monday, November 9th, the deceased was at work in the brick and tile yard, cutting a chamber, when eight or ten tons of clay fell upon him and killed him almost instantly. He had been at work in the yard about four months, and was said to know his work well, but one of the witnesses called was of opinion that the deceased was rather too venturesome. Verdict of accidental death.

Serious Boiler Explosion.—Four men and two children were seriously injured by the explosion of a boiler at Oaktree Colliery, Aberdeen, on Tuesday, 17th inst.

Fatal Result from the Fall of a Wall.—An inquest was held last Thursday, at the Eastbourne Union-house, before Mr. L. G. Fullagar, on the body of Samuel Douch, a labourer, who met with his death under the following circumstances. Jane Douch said deceased was her husband, aged 49. On Friday last he left home at half-past six to go to work. She did not see him again till he was hurt by the bricks falling on him. He said he was removing the bricks from the tank. Alfred Berry said the deceased and he were pulling down the brickwork of the old tank at the railway station. A little piece, about 3 ft., broke off and did not fall, but remained on the top, loose; deceased took an iron bar and knocked ten or a dozen bricks to let this piece down. The piece pitched over and caught him, knocking him off the wall; the brickwork rolled off him, and he got up. Verdict "That deceased died from the shock to the system, and the wound caused by the fall of a portion of a wall."

Fall from a Scaffold.—Walter Scarratt, a joiner, employed at some new buildings in Hanley, on the 13th inst., fell from a scaffold, and was severely injured on the head. He was taken to the infirmary, where he became insensible from effusion of blood on the brain, and died on Saturday. At an inquest, held before Mr. Booth, coroner, on Tuesday, the jury returned a verdict of accidental death.

Accident at Avonmouth Docks.—On Thursday, the 19th inst., the deputy county coroner, Mr. C. Scott, held an inquest at the George Inn, Shirehampton, touching the death of James Coleman, twenty-six years of age, a mason, who died on Monday evening from injuries received at Avonmouth Docks that afternoon. Elisha Knepton, a ganger, stated that on the day in question the deceased was engaged in building a wall. The carpenters required some timber for the purpose of lengthening a "gantling." A piece of timber some 30 ft. long was hitched to the crane, and was lifted up some 16 ft. to pass over some wagons that were in the way. A signal was given for the men to clear out of the way; but the back legs of the crane being lower than the centre one, the timber swung round rather quicker than was expected, and it came in contact with the wall; the nippers to which the timber was attached became unhitched, and the balk of timber fell to the ground. In its fall the timber "canted" from off one of the supports of the "gantling" and struck the deceased causing him to fall. Several men who were near the place caught hold of the deceased before he fell a second time. Witness explained to the jury that the timber, after it struck the deceased, rolled off his back on to the ground. The nippers on this occasion were not timber nippers, but ones used to lift stone. John Smith proved picking up the deceased after he was knocked down, and said that, with assistance, he conveyed him on a stretcher to the railway station; but deceased expired shortly after his arrival there. Verdict, accidental death.

Fall of a Building at Whitworth—On Wednesday, the 18th inst., a large building, which had been previously occupied as a stable, and more recently by Mr. J. Chadwick, joiner, fell with a tremendous crash, and without a moment's warning. Mr. Chadwick was in his place at the time, in company with a nephew, who was his apprentice, and his niece, who had gone there to play. The noise of falling material attracted attention, and Mr. Chadwick and his nephew and niece, who had fortunately been standing on a parlour floor which had not given way, were rescued from their dangerous position. It was then found that the nephew had been knocked down by the falling material, and his foot was caught between a joist and the flooring. He, however, sustained very slight injuries. The little girl was found lying with her head on her arms, not having sustained any injury; and Mr. Chadwick only suffered from the shock to his nervous system. One part of the building was very old, and the ends of some of the beams were completely rotten.

SCHOOL BUILDING NEWS.

Middlesbrough.—On the 19th inst. the foundation-stone of the new St. John's School, Middlesbrough, was laid by Mrs. W. R. I. Hopkins, of Grey Towers, near Middlesbrough. The new schools will only be at the distance of five minutes' walk from the old schools near the Exchange, will be close to St. John's Church, and will accommodate about 1,000 children, or 300 more than the old schools. The site has frontages into two streets, Bright-street and Russell-street, the main frontage, which is 245 ft. in length, being in the former. The architects are Messrs. Alexander & Henman, of Middlesbrough and Stockton. On the site of the old schools will be erected a new post and telegraph office.

Newport.—On Monday evening, November 16, a meeting of the subscribers to the building fund of these schools was held in the Marsh Trustees' Room. The Rev. D. Mountfield (chairman) said the meeting was called to hear an account of how the money raised for building the new schools had been expended. He now held the certificate of the Education Department certifying that sufficient school accommodation had been provided for the Newport district. The building cost upwards of 2,000*l.*, and this large amount had been voluntarily collected and subscribed. Mr. T. C. Bird (hon. sec.) then read the account, from which it appeared that the total receipts were 1,953*l.* 7*s.* 4*d.* The expenditure was—Builder, architect, and gas-fittings, 1,683*l.* 18*s.* 9*d.*; printing, legal charges, surveys, and petty expenses, 67*l.* 12*s.* 9*d.*; value of the site given, 200*l.*; leaving a balance in the treasurer's hands of 1*l.* 15*s.* 10*d.*

Odiham.—The first meeting under the new scheme of the Governing Body of the Odiham Endowed School was held on the 17th day of November last. Plans of the proposed new school buildings were submitted to the Governors by Mr. Woodthorpe, of Coleman-street Buildings, London, and having been considered satisfactory were adopted, subject to the approval of the Endowed School Commissioners. The proposed buildings, which will present a handsome frontage, will include a master's residence, with all necessary out-offices, &c., a large and lofty school-room, class-rooms, dining-rooms, and dormitories, and will be a great ornament to the town when completed.

Northwich.—The question of supplying a deficiency of Sunday-school accommodation in connexion with the Congregational Church at Northwich, has for some time engaged the attention of the leading members of that denomination. Hitherto a school has been held in the room adjoining the Town Bridge, and another in the premises in Witton that were formerly used as a day-school. The latter place was found to be quite inadequate to the requirements of that thickly-populated neighbourhood, and the energy of the principal members of the congregation has resulted in the erection of a commodious building, with a frontage in the main street, in what was previously the playground of the day-school, the old building having been converted into infant and adult class-rooms. The erection of the building has been carried out by Mr. W. Leicester, of Northwich, from designs prepared by Mr. S. Drinkwater, of Witton, at a total cost of 1,225*l.*, including the purchase of the site, and the furnishings. The large room is 65 ft. long by 25 ft. wide. There are also two new class-rooms, a library, and other appurtenances. The old school-room could not boast of high architectural qualities externally, and internally, when occupied by 150 children on a warm summer's afternoon, could scarcely come under the present sanitary requirements in the cubic space it contained. Mr. Hurst, as treasurer of the building fund, gave some particulars of the finances. As nearly as he could ascertain, the total expenditure would amount to about 1,225*l.*, of which 930*l.* had been collected, leaving 290*l.* to be raised. Mr. Thomas had promised to reduce that sum by 50*l.* conditionally that they realised the whole amount during the current year. Thanks were due to Mr. Leicester, the contractor, and Mr. Drinkwater, the architect, for the excellent way in which they carried out their undertaking.

Leeds.—A new school-room has been opened at Knostrop, in the parish of St. Saviour's, by the Rev. Dr. Gott.

CHURCH BUILDING NEWS.

Guisbrough.—The parish church of Guisbrough, one of the oldest in Cleaveland, has been reopened for divine service, after being closed for some months for alterations and repairs. The edifice had been gradually decaying, and was becoming so far unfit for the holding of religious services, that a general feeling was manifested for its restoration; and in the early part of the present year a committee, consisting of the leading members of the congregation was found to carry out that work. The architects consulted were Messrs. Armfield & Bottomley, Whitby, and the plans were prepared for putting in a new floor, re-seating the building, substituting open stalls for the high-backed old-fashioned pews, repairing the walls and pillars, and renovating the interior of the fabric were approved. The contractors were Mrs. E. Howcroft for the joiner's work, Mr. W. Rudge mason work, and Mr. J. Purdy, gas fittings and plumbing. The total expenditure has been about 1,000*l.* Additional pew accommodation has been provided, and sittings, all of which are free, are now afforded for upwards of 1,000 persons.

Wakefield.—The Wakefield Church, which has been undergoing restoration for the past seventeen years, at a cost of upwards of 20,000*l.*, has been formally re-opened by the first of a series of services. The restorations include the re-casing of the tower, the erection of a spire, the removal of the galleries, the substitution of open

stalls for large old-fashioned family pews, the insertion of a number of painted glass windows, a reredos, and new systems of lighting, warming, &c.

Bath.—The parish church of St. Peter, Monckton Farley, has been reseated and fitted. Prior to the alterations and improvements the church was filled with high pews of a most incommodious and unsightly character, and the nave and chancel were on a level. All this has now been changed. The floor of the chancel has been raised two steps above the nave, from which it is entered through a low stone screen, removed from another part of the building. Behind the communion-table, which is elevated two steps, is a new reredos, of an unpretending character, in Caen stone. These alterations have been well carried out by Mr. Jesse Hayward, of Bath, under the superintendence of Mr. C. S. Adye, architect, of Bradford-on-Avon. The heating apparatus was supplied by Mr. S. Diplock, of Bath, and the lamps by Mr. J. Brown, of Bradford; Messrs. Taylor & Edgcombe, of Bath, executed the carving. The cost of the present improvements is about 600*l.*

Cranborne.—A district church and school have been opened here. The plans being prepared, Mr. Kelford, of Cranborne, commenced the building. The site on which it is erected is a short distance from the high road to Ringwood. The total length of the building, including the master's house, is 64 ft. by 18 ft. broad, of which the church or school-house takes up 32 ft. The building is of red brick, slated, and pointed with black mortar. The windows, of which there are four on the south side, are of stone at top and bottom, with strong wood-frames, and open at the top. The roof, which is 20 ft. high, is of pine, varnished, and the walls coloured. At the east end is a small chancel, entering by a stone archway from the body of the room, and having sliding doors to close it in when the place is not used for public worship. There are lobbies for the children's clothes, and every convenience provided, Moule's earth closets being fitted up. The total cost of the whole is estimated at from 600*l.* to 700*l.*

Pimperne.—The old church, parts of which probably formed a portion of the foundation of a Norman building, being considered past restoring, it was decided by the owner and patron, Lord Portman, to rebuild the whole (with the exception of a portion of the tower) on the same site. The services of the late Mr. J. B. Green, his lordship's architect, were engaged, plans were prepared, and the work was at once commenced. The following is a description of the newly-erected church:—With the exception of the tower, the old church (which contained some remains of Norman architecture, and which have been preserved) has been taken down and rebuilt. A stone turret has been added to the tower, finished with a spirelet on the top. The church is dedicated to St. Peter. The building is in the Perpendicular style, and consists of a nave, with clearstory windows, north and south aisles, with chancel, organ-chamber, vestry and south porch, in which the figure of St. Peter is placed in a niche over the entrance-door. The walls are of Tisbury stone, with Box-ground stone dressing for all external work, and all the inside is of Corsham stone ashlar, with moulded arches and string-courses, and richly carved caps and corbels. The roofs are of deal, covered with wood stained and varnished. The curved ribs are supported on massive carved oak angels on stone corbels. The seats are open and of pitch pine, with thick moulded ends and framed backs. The screens between the chancel and vestry, and between the south aisle and vestry, are of pitch pine, handsomely carved. The pulpit is of stone, very neat, and the reading-desk of grained oak. The chancel and aisle floors are paved with Maw & Co.'s encaustic tiles, and the church is heated by hot-water apparatus from under the organ-chamber. The total length of the building is 66 ft. by 46 ft. wide, of which the nave is 42 ft. by 21 ft., and the height to the ribs in the nave is 52 ft. The church will seat about 300. The east window is of stained glass, presented by Mr. Philip Wright, son-in-law of the Rev. W. Bury, the rector, and given in remembrance of his alliance with the family by marriage. The centre light contains a full-length figure of St. Peter, with the Crucifixion above; and in the other compartments are figures representing incidents in the life of St. Peter. In the south aisle is a memorial window to the late Mr. and Mrs. Matthews, presented by members of the family, containing the four Evangelists and other saints. The west window is glazed with Powell's stamped quarries, and the remainder of the windows are of cathedral glass. There is a stone reredos in the chancel; this and the pulpit and reading-desk were designed by Mr. W. Tranah, architect, of Blandford, who has succeeded the late Mr. J. B. Green. The church has been built by Mr. Augustine Green, from plans prepared by his late brother, Mr. J. B. Green, architect, of Blandford. The carving is by Bolton, of Cheltenham. A new organ, built by Gray & Davidson, was presented by the Hon. W. H. B. Portman, M.P., and Miss Portman.

Little Aston.—The church of Little Aston (in the district of Stonnall and parish of Shenstone), as also the graveyard, was consecrated on Thursday, the 19th inst., by the Bishop of Lichfield. The offertory, devoted to the school-building fund of Stonnall, amounted to 66*l.* 17*s.* This beautiful church, dedicated to St. Peter, is in the Early English style. The architect is Mr. Street, and the builder is Mr. Yates, of Shiffnal. It consists of a nave and one narrow aisle, with tower and spire at the north-west, and vestry at the north. The whole has been executed at the expense of the Hon. E. S. Parker-Jervis, and the cost, including endowment and parsonage-house, will amount to something like 10,000*l.* There is a peal of five bells (by Messrs. Taylor, of Loughborough), which rang merrily at intervals during the day. The eagle, well designed and executed, was the gift of Mr. John Vincent Parker-Jervis. The organ was built by Mr. Halmeshaw, of Birmingham. The baptistery, according to the *Staffordshire Advertiser*, is somewhat too small, and the west door is not quite lofty enough. Nor is the pattern of the floor composed (like the pulpit, font, and reredos) of the most costly marbles, so arranged as to stand much wear and tear. There is no stained glass in the windows. The church holds 153, and all the seats are free. In addition to the feasting in the tent, every poor housekeeper in the district, and very many others, received eight pounds of beef and a gallon of beer.

East Grinstead.—On Saturday last the Bishop of Chichester re-opened the parish church of East Grinstead, which has been undergoing considerable alterations. The old-fashioned pews have been replaced by new carved oak seats, designed by Mr. J. M. Hooker, of Sevenoaks, architect. The church is now heated by a new system of hot-water pipes, and instead of being lighted with paraffine lamps, is now illuminated with gas. The old plaster on the walls has been removed, and the old lath-and-plaster ceiling has been pulled down. The alterations so far have cost 1,000*l.*, and in order to complete the cost of re-pewing alone, 500*l.* more are required.

Books Received.

Boons and Blessings the Advantages of Temperance. Stories and Sketches. By Mrs. S. C. Hall. London: Virtue, Spalding, & Co. 1875.

Mrs. S. C. Hall's last good work consists of fifteen stories or sketches, illustrated with fifteen full-page engravings, from drawings by E. M. Ward, A. Elmore, F. Goodall, Erskine Nicol, R. Thorburn, Mrs. E. M. Ward, George Cruikshank, P. R. Morris, G. H. Boughton, F. D. Hardy, E. Sherard Kennedy, N. Chevalier, H. R. Robertson, A. J. Woolmer, and W. J. Allen, besides numerous head and tail pieces, designed by the last named. Some few of the stories, such as "Digging a Grave with a Wine-glass," have been published before and widely circulated, and it is no slight recommendation of the book to say that the new ones are as good as the old. Mrs. Hall justly expresses her thanks to the fifteen artists who have powerfully assisted her in combining art with literature, "thus aiding the efforts of the valuable societies that are labouring—earnestly, zealously, and with great success—to convey conviction that 'the national vice' is the national curse, and that the labours of the pastor, the schoolmaster, and all the other engines of religious, as well as moral, social, and intellectual progress, must comparatively fail, while intoxication, not only 'fills our jails, our lunatic asylums, and our workhouses with poor,' but degrades to poverty so many households, and effectually frustrates all efforts for the discharge of duty to God and neighbour." The illustrations are indeed admirable, and but for the personal friendship of the artists no such series could have been given in a book of so small a price as this is. The one which touches us most is the Street Waifs of Mrs. E. M. Ward,—a boy and girl on the doorsteps of a London house on a winter's night. The utter misery depicted, and the grip of the boy's hand on the little sister's wrist affect us strongly. The volume is appropriately dedicated to the Earl of Shaftesbury, and offers itself as a Christmas Gift-book which cannot be too widely made use of.

VARIORUM.

The *Furniture Gazette* speaks of wood-carving in Russia:—"This art is one of the most important branches of Russian industry, which has existed for centuries. Any one who has studied the ancient art-productions of Russia, and who has seen specimens of the so-called ancient Russian monastic carved work, will be struck by the exquisitely delicate taste displayed, which is all the more astonishing considering the imperfect instruments and rough tools which were employed in those days by these self-taught artists. But the art of carving is naturally not confined alone to the artistic and purely ornamental: the peasants of Russia are very expert in all kinds of rougher carved-work, in producing articles of every-day use; many household utensils which with us are manufactured of clay or iron are carved or turned out of wood, such as spoons, platters, bowls, &c. It is this peculiar ability which has made the Russian peasant under proper instruction such an adept in artistic carving in its application to the ornamental art."

Miscellanea.

Invention for Consuming Sewer Gas.—How effectually to get rid of sewer gas is a problem that has long puzzled engineers and sanitarians. Most of the experiments have resulted in failures, and none have thoroughly succeeded, except in making what was bad a great deal worse. Considerable interest in the question has been excited in Bristol of late, and Mr. T. Harding, of the firm of Colthurst & Harding, Temple Gate, has turned his attention to the subject. At his residence at Knowle he was a good deal troubled by sewer emanations, and he hit upon a plan which he believes will solve the problem of the consumption of sewer-gas. Mr. G. Scrace, plumber, Temple-street, has been associated with the inventor in getting up the appliance. The proposed mode of dealing with the gas is an ingenious one. Connected with the main sewer is a pipe, 2 in. in diameter, and at the top of the pipe is a ball, so fixed that it allows an aperture of a ¼ in. all round, through which the sewer-gas may escape from the pipe. Running up outside the large pipe is an ordinary gaspipe, and underneath the ball at the top of the sewer-pipe a set of burners is so arranged that when lighted they make a complete circle of fire. The ball prevents the sewer-gas from rising through the centre, and it cannot escape through the flame, which entirely surrounds the aperture. The invention, which has been patented, may be easily applied to the public lamps.

Subsidence of a Portion of the New Reservoir at Pontefract.—Last week portions of two large arches at the north end of the new reservoir in course of construction for the storage of water for supplying the town of Pontefract, fell entirely to the foundations, and will consequently cause considerable labour and expense in replacing the same. The natural foundations are admirably adapted for the purposes of a tank, being hewn out of the solid rock. Puddling with clay for about 28 in. in thickness, at the bottom of the tank (which is also laid with bricks, two in thickness), forms the basis of building operations, the walls and pillars of which spring from the reservoir in a series of arches. The pillars at the north end have, it appears, subsided considerably, the arches of which were completed, thus reducing the whole, evidently from the compression of the puddling bed, on which the whole stands.

Bristol.—Need for improved dwellings for the working classes was referred to at a meeting over which Bishop Ellicott presided, by the Rev. Mr. Hazledine, who stated that in his parish one court had eleven houses with only one sleeping room in each, and there lived fifty-one persons, twenty-nine being adults. In five streets dwelt 102 habitual drunkards, forty-six of whom were men and fifty-six women.

A Memorial Brass.—The "Old Boys" of the King's School have just had a brass placed in the north transept of Gloucester Cathedral, as a memorial of the late Rev. Herbert Haines, formerly the second master of the school, and an authority on the subject of brasses. The brass is laid on a slab of Pennant stone, 7 ft. by 3 ft. 4 in. The general treatment was designed by Mr. Capel N. Tripp, hon. sec. to the committee, subject to the approval of Messrs. Waller & Son, architects to the Dean and Chapter, and the work has been developed and executed by Messrs. Heaton, Butler, & Bayne, at a cost of 116*l*. The architectural detail is of the fourteenth century. The figure, three-quarter life-size, is represented in an attitude of prayer and draped in modern Ecclesiastical vestments. The likeness is good. The inscription was written by the Rev. J. Russell Washbourne.

Death of Mr. Tom Hood.—An illness under which Mr. Tom Hood, the editor of *Fun*, had been suffering for some time past, resulted fatally on Friday, the 20th inst. The deceased, who was the son of the late Thomas Hood, the well-known poet, was born at Lake House, Wanstead, Essex, January 19th, 1835. He was educated at University College School and Louth Grammar School, and entered as a commoner at Pembroke College, Oxford, in 1853, His first work, "Pen and Pencil Pictures," was published in 1854-5, and has been followed by numerous novels and books for juveniles. He illustrated his father's comic verses, "Precocious Piggy," and on other occasions wielded pencil as well as pen, and was appointed editor of *Fun* in May, 1865. Mr. Hood was in his 40th year. He was buried on Tuesday, the 24th inst., at Nunhead Cemetery.

Chelsea Parish Surveyor. — Mr. Joseph Pattison, the surveyor to the parish of Chelsea, has sent in his resignation after thirty years' service. Mr. Pattison states that he finds the work in his department so continually increasing that he is not equal to it; and those who know anything of the boundaries of the parish of Chelsea, and the manifold duties imposed on its surveyor, who has daily to walk as far and as fast as a postman on Valentine's-day, will not be surprised. The Chelsea vestry have resolved to write to the various metropolitan vestries for information as to their surveyors' duties and emoluments. The Board of Guardians have pensioned relieving-officers and others, but whether the Chelsea vestry have the power to exercise the pensioning of a "worn-out surveyor" remains to be seen.

Yorkshire College of Science.—An ordinary meeting of the General Council was held in the Board Room of the College on Thursday afternoon, under the presidency of Lord F. C. Cavendish, M.P. There were also present Sir A. Fairbairn, Dr. Heaton, Mr. F. W. Fison, Mr. J. R. Ford, Mr. S. C. Lister, Mr. O. Nussey, Mr. T. Scattergood, and Mr. H. H. Sales (secretary). The reports from the various committees received the approval of the Council. The business transacted was mainly of a routine character. The Council minutely inspected the college buildings and fittings, which are now approaching completion. The number of students already enrolled was regarded as very satisfactory. Upwards of fifty students over the age of seventeen years are in attendance at the various classes.

Presentation to a Foreman.—The *employés* of Mr. George Jennings, of Stangate, Lambeth, at a supper held on Saturday, November 21st, at the Mitre Hotel, Stangate, presented Mr. S. J. Merchant with a handsome ormolu timepiece. Mr. M. Johnson, on behalf of the subscribers, alluded to the number of years Mr. Merchant had been amongst them, and was happy in being the medium of tendering him the timepiece, as a slight recognition of their respect and esteem, and hoped that he would live long to enjoy it. Mr. S. J. Merchant thanked his late colleagues for their appreciation of his conduct, and hoped that he would still continue to deserve the good opinion they had formed of him. Votes of thanks were accorded to the committee, coupled with the name of Mr. Halligan, secretary.

Metropolitan Management.—At the last meeting of the Social Science Association the question of a municipality for the metropolis was again discussed, and again adjourned. Mr. James Beal declared the sanitary condition of the more densely populated suburbs to be disgraceful to the age, and such as would not be tolerated under municipal authorities. The discussion was again adjourned.

Mr. Edward Levien, M.A., F.S.A., died, we regret to say, on the 6th inst., at his residence, Camden-street, in the fifty-sixth year of his age. He was well known in literary circles for his intimate and accurate acquaintance with ancient manuscripts and historical subjects. Educated at Baliol College, Oxford, he held for a short period a classical professorship at Glasgow, and was subsequently appointed by the trustees of the British Museum to the position of assistant in the manuscript department, which he held from 1850 to the time of his death. He acted, also, with great ability, for several years, as one of the honorary secretaries of the British Archæological Association, and contributed many valuable and interesting papers to its journal.

Industrial Dwellings.—We some time ago referred to the fact that the Improved Industrial Dwellings Company had offered premiums of 250*l*. and 150*l*. for the best designs for covering a large site in Goswell-road, on the Marquis of Northampton's estate, and mentioned that twenty designs had been received. We are asked now to say that Messrs. Charles Barry, George Godwin, and A. Waterhouse will assist the directors in arriving at a decision on the merits of each. The designs will, by permission of the Lord Mayor, who is one of the directors of the company, be exhibited at the Mansion House, in a room specially set apart for the purpose.

The Ventnor Local Board have appointed Mr. J. G. Livesay, C.E., who has for nearly eleven years been Town Surveyor of Ventnor, to the office of Consulting Engineer to the Board, at a commission of 3½ per cent. on the cost of permanent works to be carried out under his superintendence. The Board intend to appoint some young man, probably without a professional education, to undertake the routine duties of Town Surveyor and Inspector of Nuisances, and to act as foreman over the workmen employed by the Board. If without proper education, how can he satisfactorily perform his duties?

A Wood Paving for Oxford-street.—Owing to an offer on the part of Captain Coote, for the inhabitants of Hereford-gardens, Hyde Park, to pay one-third of the cost of laying down a wood paving in Oxford-street, opposite Hereford-gardens, so as to obviate the present noise, the Vestry of St. Marylebone have accepted the offer, and intend to carry out the work at once, at a cost of 1,166*l*., a wood-paving company undertaking to keep it in repair for two years free or cost, and for the next fifteen years at an annual cost of 83*l*.

The Free Picture Gallery, Brighton.—This institution is to be free for three days a week, and sixpence admission will be charged for the other three days, on the recommendation of the Fine Arts sub-committee. "If," said Mr. Alderman Hallett, "they adopted the committee's plan, they would have a picture gallery in the town equal to the exhibitions of London, Liverpool, and Glasgow. In fact, pictures of the highest class, more than enough to fill a second gallery, had already been offered to them, and the expense of hanging them."

The Denbigh Beredos Disputes. — The opening for service of the Unconsecrated Church at Denbigh was brought to a sudden termination last Sunday. In the morning the curates received legal notices from the Bishop of St. Asaph, prohibiting them from officiating in the church on pain of having their licences cancelled. The rector, being unwell, and fearing legal proceedings, the services were abandoned. The suddenness of this decision, which came as a surprise upon even the church-building committee, caused intense excitement.

Mortality in Grimsby.—The mortality among children in this township, says the *Lincolnshire Chronicle*, just now is frightful. Parents all round are trembling for the safety of their little ones. Scarlatina is the great instrument of the dread destroyer. We are informed that one undertaker alone, in three days, had no less than thirteen funerals. Of course this is an exceptional case, but still the deaths are shockingly frequent. Children from two to six years of age are the class among whom it is most fatal.

The late Mr. Milner, of "safe" fame, has left a fortune of 160,000*l*. He directs that one-tenth of this shall be distributed in charities, in four equal proportions of 4,000*l*. for London and Manchester, where he had extensive agencies, Liverpool, where his works were situated, and Sheffield, to which town he belonged.

The Late Mr. F. Lenox Horne.—The announced death of this gentleman, at the age of 67, will remind some of our readers of a genial lecturer and writer who was first heard some twenty years ago at the Polytechnic Institution. He was the author of several farces, "Two Heads are Better than One," "The Tale of a Comet," played at Drury-lane two or three years since, and some others, and delivered many times a serio-comic musical lecture on "The Use and Abuse of Art." Mr. Horne was the brother of the eminent author of "Orion."

Secretary to Amalgamated Engineers.—The election of a general secretary to the Society of Amalgamated Engineers, in succession to the late Mr. William Allan, is exciting interest amongst trade unionists. There are two candidates,—Mr. John Wilson, who was assistant at the time of Mr. Allan's decease; and Mr. W. R. Horne, who held the same post before Mr. Wilson's election. Only members of the Society are eligible, and the election must be decided by vote.

Stained-glass Window in York Minster. The Yorkshire Archæological Society has in the press a description, by Mr. J. Fowler, F.S.A., with notes and coloured plates, &c., of a window in York Minster, representing the Life and Miracles of St. William, Archbishop of York in the twelfth century. This window, which was presented to the cathedral about the year 1420, by the family of Lord Roos, of Hamlake (now Helmsley), contains upwards of 800 ft. of painted glass.

New College for Ladies. — The London correspondent of the *Scotsman* says that Mr. Holloway is about erecting, at a cost of something like 100,000*l*., at St. Ann's Heath, Virginia Water, a new university for ladies, on an estate which he purchased for 25,000*l*., and that he has charged an architect to draw up the necessary plans. It is understood that the whole affair will cost 150,000*l*. The plans are far advanced.

Asphalte Paving.—At the last meeting of the Commissioners of Sewers of London, a letter was read from the inhabitants of Cheapside and the Poultry, stating that the asphalte paving had conduced greatly to their comfort, begging that greater pains might be taken to cleanse it, and expressing their opinion that its slipperiness was attributable solely to the dirty state in which it was frequently left. The letter was referred to the Streets Committee.

New Central Markets for the City.—Last week, Mr. W. Corrie, the City Remembrancer, gave notice of his intention to apply in the next session of Parliament for powers to enable the Corporation of London to enlarge the western exterior of the Metropolitan Meat Market, and to erect a new fruit, flower, and vegetable market on a site near the western extension of the meat market.

A New Mission-hall for Swansea.—One result of the visit of the Rev. Hay Aitken and his fellow missioners to the town is likely to be accomplished in the erection of a mission-hall, which is to be considered as a memento of the last mission. The committee met on Tuesday last, when it was reported that 740*l*. had been promised out of the 2,000*l*. which is the estimated cost of the structure.

A New Synagogue for Brighton.—On November 19th, Dr. N. M. Adler, Chief Rabbi, laid the foundation-stone of a new synagogue in Brighton, in the presence of a representative company of the Hebrew persuasion. The building will be Byzantine in style, and will accommodate 500 persons. Mr. T. Laniton, of Brighton, is the architect.

Building at Carshalton.—Improvements have made great strides in this parish of late years, particularly since the railway station was built in the immediate neighbourhood; but the Public Hall, built in the centre of the town, which will be opened in a few weeks, is the greatest of all. Already several societies have made application for the hall, and we have no doubt it will be used as it ought to be.

The Albert Embankment.—A report from the Works Committee of the Metropolitan Board of Works, on November 20th, recommending that the Lambeth Vestry be informed that the Board were not prepared to entertain the question of extending the Albert Embankment was agreed to.

Tenders, Metropolitan Board of Works.—At the meeting last week tenders were received from the following firms for the execution of the general works in district "A," North of the river Thames, for alternate periods of one, two, or three years—viz., Mr. W. Dunn, Mr. T. Pearson, Messrs. Nowell & Robson, Mr. H. Potter, Mr. Stephen Carey, Messrs. J. Mowlem & Co. The tender of Messrs. J. Mowlem & Co. was accepted for a period of three years.

Labour Market of New York.—The startling fact is vouched by one of our morning contemporaries that at this moment, as near as can be ascertained from careful inquiry, there are no less than 90,000 of the mechanic and labouring classes out of employment in that city.

Ely.—Holy Trinity Parsonage House, in the Nut-Holt, Ely, is now fast approaching completion; the builders are Messrs. Waters & Feast, of Haddenham; the architect is Mr. W. T. Pierce, of Rochampton. The amount of the contract is 1,605*l.* This, with architect's fees, fencing, &c., will render the whole cost 1,800*l.*

Exhibitions.—The private view of the Winter Exhibitions of the Society of British Architects will take place this, Saturday, November 28th. That of the Institute of Painters in Water-colours is fixed for the following Saturday, December 5th.

Drainage Contract.—The seal of the Oxford Local Board was on the 18th of November ordered to be affixed to Mr. Dickenson's contract for 27,970*l.* for carrying out the works of Contract No. 4 of the drainage.

Windsor.—It is proposed to erect a new church in Bier-lane, one of the lowest parts of the town. We hear that 950*l.* have been raised; 400*l.* more are required. Her Majesty contributes 100*l.*

The Clyde Shipbuilding Trade.—Shipbuilding on the Clyde, says *Capital and Labour*, appears to be on the wane, and the coming winter is likely to exhibit great slackness of employment.

An Architect Candidate for Paris.—M. Viollet-le-Duc, the architect, is one of the Republican candidates for the Municipal Council of Paris.

Society of Arts.—On Wednesday evening, November 25th, a paper "On School Buildings and School Fittings," was read by Mr. T. Roger Smith. We may refer to it hereafter.

Architectural Association of Ireland.—The opening meeting of the Session was held at the Antient Concert Rooms, on Thursday evening, the 26th inst.

The Late Mr. George Gutch.—We mention with deep regret the death of this gentleman, one of the oldest of the Metropolitan District Surveyors.

Mr. Smellie Watson, R.S.A., died a few days ago. He was one of the few survivors of the band of artists who originally formed the R.S.A. incorporation.

TENDERS

For stabling, &c., for the London General Omnibus Company, at Kennington Park-road. Mr. P. Tosh, architect. Quantities by Mr. W. A. J. Bolton:—

	If sand found on site.	Extra if no sand.
Robbins & Co.	£2,630 0 0	£46 0 0
Dover, Son, & Co.	2,461 0 0	30 0 0
Thompson	2,460 0 0	170 0 0
Tyerman	2,353 0 0	111 0 0
Warr	2,339 0 0	72 0 0
Cropper Brothers	2,267 0 0	127 0 0
W. & T. Crooker	2,254 0 0	25 0 0
Turrell	2,200 0 0	112 0 0
Marsland	2,195 0 0	95 0 0
Garrud	2,183 0 0	40 0 0
Perkins	2,177 0 0	120 0 0
Hunt	2,153 0 0	30 0 0
Sawyer	2,153 0 0	25 0 0
Niblet & Son	2,150 0 0	45 0 0
Lewis	2,149 0 0	95 0 0
Aitchison & Walker	2,115 0 0	89 0 0
Gill	2,093 0 0	23 0 0
Downs	2,069 0 0	130 0 0
Mason & Bristy	1,997 0 0	165 0 0
King	1,838 0 0	100 0 0

For alterations and repairs to the Victory public-house, Newnham-street, Edgware-road, for Mrs. Copas. Mr. H. J. Newton, architect:—

Ebbs & Sons	£330 0 0
Brown	315 0 0
Thompson & Smith	311 0 0
Taylor	291 0 0
Hookley	270 0 0
Shurmur (accepted)	262 0 0

For alterations, &c., to Nos. 59, 60, and 61, Lissongrove, for Messrs. Spencer, Turner, & Boldero. Mr. T. Parker, architect. Quantities supplied:—

Simpson & Son	£2,247 0 0
Temple & Foster	1,872 0 0
Cross & Son	1,730 0 0
Morseman	1,590 0 0

For building new premises for Mr. Bryett, in the Caledonian-road. Quantities not supplied:—

Perry Brothers	£2,547 0 0
Batchelder	2,373 0 0
Kirk	2,256 0 0

For alterations and repairs to Nos. 5 and 6, Hart-street, Mark-lane. Mr. James Harrison, architect. Quantities supplied by Mr. H. J. Gordon:—

Little	£1,279 0 0
Sewell & Sons	1,124 0 0
Ennor	1,060 0 0
Browne & Robinson	1,053 0 0
King & Son	1,020 0 0
Hobson	995 0 0
Merritt & Ashby	973 0 0
Thomas	894 0 0

For additions and repairs to premises, Tenter-street, Whitechapel, for Mr. L. Silberberg. Mr. C. Reilly, architect:—

Turner & Sons	£1,312 0 0
Heeps	1,295 0 0
Newman & Mann	1,256 0 0
Thiddle & Son (accepted)	1,067 0 0

For alterations and repairs to No. 11, Worship-street, for Mr. F. Hunt. Mr. Henry Shaw, architect:—

Sawyer	£377 0 0
Lewis	356 0 0
Boyce	349 0 0

For roadmaking and drainage works at Shepherd's-bush, for the British Land Company, Limited:—

Marshall	£4,200 0 0
Crockett	3,906 0 0
Bloomfield	3,557 0 0
Pizzey	3,555 0 0
J. & S. Williams	3,440 0 0
Richardson	3,350 0 0
Keeble	3,288 0 0
Thompson & Son (accepted)	2,720 0 0

For erection of buildings, Norton Folgate. Mr. C. Fowler, architect. Quantities by Mr. Lovegrove:—

Wall Brothers	£1,997 0 0
Crabb	1,950 0 0
Bangs	1,874 0 0

For first section of Mount St. Marie's College, Kilburn. Mr. E. Welby Pugin, architect. Quantities supplied by Mr. R. O. Harris:—

Lascelles	£2,150 0 0
Merritt & Ashby	2,090 0 0
Home	1,980 0 0
Watson	1,910 0 0

For roadmaking, Wilderness-row, for the Metropolitan Board of Works:—

Coker	£6,000 0 0
Turner	5,900 0 0
Pearson	5,493 0 0
Webster	5,409 0 0
Knight & Son	5,390 0 0
Mowlem & Co.	5,300 0 0
Carey	5,175 0 0
Nowell & Robson	4,845 0 0
Griffiths	4,760 12 0

[From this it would appear that the observation in our last that the accepted tender was not the lowest was incorrect.]

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We are compelled to decline pointing out books and giving addresses.

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

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